UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 4
ATLANTA FEDERAL CENTER
61 FORSYTH STREET
ATLANTA, GEORGIA 30303-8960

MAR 10 2016

Ms. Sarah Knight
Smith, Hulsey & Busey
225 Water Street, Suite 1800
Jacksonville, Florida 32202

RE: Freedom of Information Act Request No. EPA-R4-2016-002667

Dear Ms. Knight:

This letter is in response to your Freedom of Information Act (FOIA) request of January 12, 2016, regarding or relating to the request by the Florida Department of Environmental Protection (FDEP) to the Environmental Protection Agency (EPA) to evaluate, assess, designate, or list the former Manufactured Gas Plant at 901 North Main Street, located in Jacksonville, Florida.

Please find enclosed records responsive to your request. Fees are waived as **de minimis**.

Since some information maintained by the Environmental Protection Agency is submitted by state agencies, you may wish to contact the state at the following address:

Florida Department of Environmental Protection
3900 Commonwealth Boulevard M.S. 49
Tallahassee, Florida 32399
Telephone: (850) 245-2118 or Email: www.dep.state.fl.us

You may appeal this response to the National Freedom of Information Officer, U.S. EPA, FOIA and Privacy Branch, 1200 Pennsylvania Avenue, N.W. (2822 T), Washington, D.C., 20460 (U.S. Postal Service only), or via email at HQ.FOIA@epa.gov, or through EPA's FOIAonline system. Only items mailed through the United States Postal Service may be delivered to 1200 Pennsylvania Avenue, N.W. If you are submitting your appeal via hand delivery, courier service, or overnight delivery, you must address your correspondence to 1301 Constitution Avenue, N.W., Room 6146J, Washington D.C. 20004. Your appeal must be made in writing, and it must be submitted no later than 30 calendar days from the date of this letter. The EPA will not consider appeals made after the 30 calendar day limit. The appeal letter should include the FOIA number listed above. For quickest possible handling, the appeal letter and its envelope should be marked "Freedom of Information Act Appeal."

Should you have questions regarding this response, please contact Donna Robinson at (404) 562-9500 or robinson.donna@epa.gov.

Sincerely,

Vickie H. Sellers

for Kenneth R. Lapierre
Assistant Regional Administrator

Enclosures

FREEDOM OF INFORMATION ACT REQUEST
INDEX OF DOCUMENTS
EPA-R4-2016-002667

1. State of Florida Manufactured Gas Plant - Assessment and Remediation Status Report
   Dated: March 22, 2013

2. Letter from Ms. Mary Jean Yon, Director, Division of Waste Management, to
   Mr. Franklin E. Hill, Director, Superfund Division, Subj: Solicit position of the State of Florida on the listing of the Main Street Manufactured Gas Plant (MGP) Site in Jacksonville on the National Priorities List (NPL). Dated: April 2010

3. Letter from Ms. Jennifer Wendel, Tetra Tech, to Ms. Sandra Harrigan, Subj: Hazard Ranking System Documentation Record, Revision 0, for Main Street Manufactured Gas Plant
   Dated: April 8, 2010

4. Superfund Memorandum of Agreement between the Florida Department of Environmental Protection (FDEP) and the Environmental Protection Agency (EPA)
   Dated: November 19, 1999

5. Preliminary Contamination Assessment Plan – Park View Inn, 901 North Main Street
   Dated: March 8, 1999

6. Hazard Ranking System (HRS) Documentation Record

STATE OF FLORIDA
MANUFACTURED GAS PLANT
AKA: COAL GASIFICATION PLANT
ASSESSMENT AND REMEDIATION STATUS

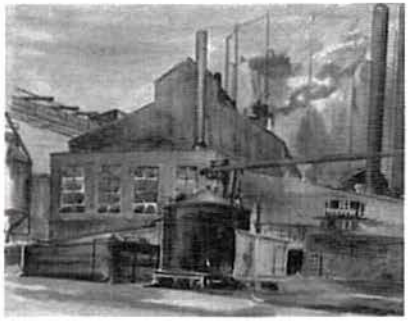
Prepared By:
Florida Department of Environmental Protection
Division of Waste Management
Bureau of Waste Clean-up
CERCLA Site Screening Section

A. James McCarthy Jr., P.G
Professional Geologist II

March 22, 2013

STATUS of FLORIDA MANUFACTURED GAS PLANT SITES
March 2013

Introduction



Raphael Ellender
(1906-1972)
"The Gas Works"

In September 1985, the FDEP Site Screening Superfund subsection (CERCLA Group) was tasked by then Bureau Chief Bill Buzick to identify and conduct Preliminary Assessments (PAs) at Florida's known and unknown manufactured gas plant (MGP) sites. A legacy of the "Gas Light" era, these plants have also been referred to as "coal gas" or "coal gasification plants". This request was spurred by the discovery of coal tar contamination at the People's Gas facility in North Miami Beach. Through a heating process, MPGs used coal (or coke); steam and a gasification agent (naphtha, Bunker C fuel oil, diesel fuel No. 6) to produce a combustible gas (hydrogen & carbon monoxide) for City street gas lights, home lighting and stoves. These plants were often municipally owned. However, they were often franchised out to private utilities. These plants operated in Florida from the late 1880's to the late 1950's. Most MGP operations ceased in Florida by 1959 with the completion of the natural gas transmission lines. Waste products from MGP operations included tars, aqueous ammoniacal liquors, cyanide "Prussian Blue" and heavy metals. Coal tar contains a number of volatile organic compounds, benzene, ethyl benzene, toluene & xylene (BTEX) and polycyclic aromatic hydrocarbons (PAHs) [i.e. benzo [a] pyrene]. Housekeeping practices at the MGPs were very sloppy. Tar and other waste products were often discharged directly to the ground and/or into nearby streams. Many of the storage tanks (tar water separators, pits, and Gasometers) were prone to leaking. As a result, soil and groundwater contamination was fairly common at the MGPs.

Through the use of the EPA's Radian Corp. 1984 Report on Survey of Tar Disposal, Locations of Town Gas Producers, Brown's Directories of American Gas Companies (1887-1944), Sanborn Fire Insurance Maps, library research and just plain detective work, the FDER/FDEP CERCLA Group initially identified 24 locations of Florida MGPs. The list ultimately grew to 29 MGP and MGP Dump sites. However, two of the suspected MGP sites turned out to be a transfer station (Deland Gas Systems) and the other produced only Hasche gas (Deland Hasche Gas Plant) with no detected MGP impacts. Five of the MGP sites are currently under EPA Region 4 lead as Superfund Alternative Sites (i.e. West Florida Natural Gas, Cascade Park Gasification Plant, Orlando Gasification Plant, Sanford Gasification Plant & St. Augustine Gas Plant). The first list of Florida MGP locations and status was generated in January 1990. This list included the location, owner and status of assessment and remediation. This list was subsequently updated in October 1990, September 2003, February 2004 and May 2009. Since the last update an MGP Dump (Aventura Gasworks Dump) and an old MGP (Key West Gas & Electric) were discovered and investigated. Information from this list was derived from FDEP's District offices, EPA Region 4 and the EPA Superfund Information Systems and Superfund NPL/ Superfund Alternative site websites. The Site Identification numbers (i.e. Comet #s, Folio #s, etc) are included in the Tables for each site. The reader is encouraged to review the site files on FDEP's Oculus™ database or County websites (Broward, Miami- Dade) the for more detailed information about the MGPs
http://www.epa.gov/region4/superfund/sites/sites.html
http://cfpub.epa.gov/supercpad/cursites/srchsites.cfm

References

Villaume, J, Lowe, P., Unites, D. 1983. Proceedings of the Third National Symposium on Aquifer Restoration and Groundwater Monitoring - Recovery of Coal Gasification Wastes: An Innovative Approach.

Harkins, S., et al. February 1988. U.S. Production of Manufactured Gases: Assessment of Past Disposal Practices. EPA/600/2-88/012. Research Triangle Institute.

Environmental Research & Technology, Inc. and Koppers Co., Inc. September 1984. Handbook on Manufactured Gas Plant Sites.

Gas Research Institute. October 1987. Management of Manufactured Gas Plant Sites Volume 1: Wastes and Chemicals of Interest. GRI-87/0260.1

Hatheway, Allen. 2002. "Geoenvironmental protocol for site and waste characterization of former manufactured gas plants; worldwide remediation challenge in semi-volatile organic wastes". Elsevier Science B.V Engineering Geology 64 (2002) pp 317-338. www.elsevier.com/locate/enggeo

Buzick, B. to District Mangers. September 6, 1985. FDER interoffice memorandum Re: Former Gas Manufacturing Facilities.

Dr. A.W. Hatheway's Former Manufactured Gas Plant web site. http://www.hatheway.net/

Brown's Directories of American Gas Companies Gas Statistics, Florida. 1887 to 1944, 1950 & 1960. (various publishers).

Sanborn® Fire Insurance Maps 1867 to 1970. Major Florida Cities

EPA Region 4 Superfund Sites website. http://www.epa.gov/region4/superfund/sites/sites.html

Jim McCarthy, PG II
FDEP/CERCLA Site Screening Section
Bureau of Waste Cleanup
Division of Waste Management
March 22, 2013

STATUS of FLORIDA MANUFACTURED GAS PLANT SITES
March 2013

Plant Address	District	Site ID # Or Folio #	Gas Type	CERCLA Assessment	Comments Re: EPA, County and/or State Enforcement
Gainesville Gas Plant Aka: Poole Roofing Co. 710 S.E. 2nd St. Gainesville, FL 32601	NE	COM_69589 BF010001000 BF010001001 BF010001002 8518101	C,W,CW	PA-12/1987 PAR-9/1989 SSI-4/1990 ESI-12/1999 Recommendation: FA	EPA OCA: State Lead Cleanup. 1992-Consent Order Conditional approval of contamination assessment. Portion of site is Sprout Pilot Brownfield project. 2001-2002 BSRAs signed. 3/2008 RAP Source Removal Plan for Phase 1 (Poole Roofing & CSXT Parcel) submitted. 12/2008 Phase 1 RAP Addendum approved, Phase I source removal completed 7/2010. 2/2009 Phase 2 (CSXT property) RAP submitted. 2009-2010 Phase 2, dewatering, water treatment and soil removal. More than 255,000 tons of contaminated soil removed. As part of the petroleum program, 121,220 tonnage of soil were removed in late 2009 and early 2010.
Main Street MGP/Parkview Inn Aka: EHT/Confederate Park 901 North Main St. Jacksonville, FL 32204	NE	COM_152721 COM_185118 9801051	Unk	PA-4/2000 SI- 3/2002 Recommendation: FA	Coal tar residuals found under old hotel and adjacent Confederate Park. EPA OCA. Currently, State lead cleanup. However, State requested EPA action. COJ and FDEP NE Dist. Neg. CO. for Conferderate Park. Abandoned Hotel now on plant property. Was possible Brownfield site. Coal tar contamination found in former footprint of Hogan Creek on City owned Confederate Park in 2001 & 2008. Little cooperation with PRPs. State requested EPA evaluate for taking as an EPA site.9/2009 FDEP notifies PRP (Park Group Inv.) of further EPA action. COJ submits CAR Addendum for Confederate Park to FDEP. COJ completed 2nd phase of contamination assessment on Confederate Park. 4/2010 EPA request FDEP position on NPL listing. 5/2011 COJ submits SAR for Confederate Park. 5/2012 FDEP concludes assessment phase completed on Confederate Park and asks for RAP. 7/2012 COJ requests extension for RAP on Confederate Park. Still in assessment phase for motel portion. No remediation activities to date. State requests a hold regarding NPL listing.
Palatka Gas Authority Aka: FLA Power & Light 518 Main St. Palatka, FL 32177	NE	COM_68359	C,W	PA-2/1988 SI-3/1991 Recommendation: NFRAP	Completed initial Contamination Assessment phase. Remediation remedy-Natural attenuation and GW monitoring. However, Further assessment needed. Completed Contamination Assessment. Large scale SL removal and gw conducted in 2004. 11/2008 RAP submitted. 3/2009 RAP approved. 5/2009 Remediation started incl. NAM GW monitoring. Remediation consists of bioremediation, sulfate injection and GW treated with GAC filter. GW monitoring and remediation continue.
Peoples Gas System/TECO Aka: Jefferson Smurfit Corp of America Aka: Former Manufactured Gas Plant 1445 West Church St. & 1580 West Beaver St. Jacksonville, FL 32204	NE	COM_127942 COM_15605	C,W,CW	PA-10/1985 SSI- 6/1986. Reassessment-7/2001 Recommendation: FA	EPA OCA, State lead is FDEP-Northeast district. Two PRP funded IRAs (soil removal) conducted. Further assessment req. Additional Assessment shows offsite gw impacts. PRP has filed for bankruptcy, suspended work on site. 6/2009 FDEP requests additional assessment from TECO. 6/2011 SAR Addendum TM submitted. 11/2011 FDEP agrees additional GW assessment needed and to defer RAP. 4/2012 Proposed off-site GW sampling map sent to FDEP. 9/2012 Off-site site access granted.
Pintsch Compressing Gas Co. Gas Works Aka: West Bay Creosote Intersection of West of Bay Street and Myrtle Ave. Jacksonville, FL 32202	NE	COM_69669 271-1	Unk	PA-11/2001 SI- 12/2008 Recommendation: FA	Former rail yard MGP. Part of FDEP SIS West Bay Creosote study. Initially an EPA Lead. Soil and some GW contamination detected during 2008 SI. Due to lack of receptors and urban setting, EPA issued an NFRAP. Site referred to NE District. No Files on FDEP Oculus database.

STATUS of FLORIDA MANUFACTURED GAS PLANT SITES
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Plant Address	District	Site ID # Or Folio #	Gas Type	CERCLA Assessment	Comments Re: EPA, County and/or State Enforcement
Riverfront Park MGP Site Aka: Palatka Gas Light & Fuel Co. River and South 3rd Sts. Palatka, FL 32177	NE	COM_140647	C,W	PA-1/1988 SI- 10/1989 Recommendation: NFRAP	Site Archived by EPA 8/90. State Lead. Assessment and remediation (soil excavation) complete. enforcement closed.
St. Augustine Gasification Aka: St. Augustine Gas Co. Aka:St, Augustine Gas Service 98 Riberia St. St. Augustine, FL 32084	NE	COM_69756	W,CW	PA-3/1988 SI-1/1992. ESI- 4/1997. Recommendation: FA	MGP impacts to Tolomato River and adjacent wetlands . EPA lead. Superfund Alternative site. AOC signed between COSA, Atlanta Gas and EPA for EE/CA in 9/98. Final EE/CA report 4/00. Excavation of contaminated soil & sediments approved by EPA 9/00. AOC signed between COSA, Atlanta Gas and EPA for Remedial action in 3/01. Contamination. Assessment complete. Removed approx. 70,000 yd^3 of contaminated SL by 1/02. NAM for VOCs started for GW in 2003. Work plan for Marina developed sent to EPA and NOAA. Work plan deals with handling of contaminated Sed. Work plan and HASP approved 11/06. Dredging Marina excavation in 2007. 99% of source contamination removed. Remedy construction complete. GW monitoring on-going. Supposed to have marina, hotel and condominiums when complete. However, site development on hold due to lack of funding. Robenson Joseph (404-562-8891)is the EPA RPM joseph.robenson@epa.gov
Daytona Beach Gasification Plant Aka: Daytona Beach Service Center Aka: Daytona MGP 132 N Seagrave Ave. Daytona Beach, FL 32014	C	COM_91018	W,CW	PA-9/1990 SI- 10/1991 Recommendation: NFRAP	Site Archived by EPA in 1993. Site lead by FDEP Central District. Site Assessment complete. Has performed an IRA soil/source removal, are continuing FP removal. FP recovery wells installed. FP removal and long term GW monitoring ongoing
Deland Gas System SW corner of S. Florida & Beresford Ave int. Deland, FL 32720	C	COM_315091	N/A	PA-6/1991 LSI- 9/1999 Recommendation: NFRAP	Tank transfer station. No MGP operations. Gas piped from Sanford Plant. No further federal or State action.
Deland Hasche Gas Plant 401 North Stone Street Deland, FL 32720	C	COM_313314	N/A	PA-7/1997 SI- 4/1998 Recommendation: NFRAP	Site Archived by EPA . Hasche gas process. No MGP contaminants detected. No further federal or State action
Orlando Gasification Plant 600 West Robinson St. Orlando, FL 32801	C	COM_241803	C,W,CW	PA-7/1989 SI- 2/1991 ESI- 5/1996 Recommendation: FA	EPA Lead. Superfund Alt.Site. Non-NPL PRP search completed 6/01. AOC signed in 2002. RI/FS neg. started 6/03. Phase 1 RI soil and GW sampling complete 9/04. Ph.II RI Work plan submitted to EPA 11/05. Ph.II RI Addendum WP submitted 5/06 to delineate coal tar contamination in Floridan aquifer. Drainage wells may have provided open conduit to Floridan aquifer. Phase II RI fieldwork completed 1/08. 8/2010 soil gas and groundwater monitoring plan approved. 2011-2012 determination of OU1 cut lines was negotiated. 1/13 Draft Feasibility Report for OU1 (Site soils & upper-level aquifer) has been submitted and under EPA review; FDEP has no comments. PRPs continuing remedial investigation of OU-2 (deepwater aquifer). Robenson Joseph (404-562-8891) is EPA Project Manager Joseph.Robenson@epamail.epa.gov

STATUS of FLORIDA MANUFACTURED GAS PLANT SITES
March 2013

Plant Address	District	Site ID # Or Folio #	Gas Type	CERCLA Assessment	Comments Re: EPA, County and/or State Enforcement
Peoples Gas/West Florida Natural Gas 613 NE Osceola Ave. (Behind 206 N.E. 9th Street) Ocala, FL 34470	C	COM_134179	W,CW	PA-12/1987 PAR-6/1989 Desk-top SI- 1/1991 ESI 1/2000 Recommendation: FA	Superfund Alternative site. EPA lead. People's Gas and FDER enter CO in 1988. PRP funded. IRA soil removal (10,000 tons MGP impacted soils) in 1990. FDEP asks EPA to take enforcement lead in 6/99. AOC for RI/FS signed between PRP and EPA in 6/01. HRS documentation package complete 3/02. RI fieldwork conducted in 2005. RI report approved by EPA in 2/08. Site Assessment complete. Concrete cap installed. 7/2009 Draft FS submitted to EPA. Treatability studies on-going. ROD should be completed in FY 2014. Robenson Joseph (404-562-8891) is EPA Project Manager Joseph.Robenson@epamail.epa.gov
Sanford Gasification Plant Aka: Florida Public Utilities 830 West 6th Street (both sides of Street) Sanford, FL 32771	C	COM_160171	W,CW	PA-4/1990 SI- 1/1992 ESI-6/1997 Recommendation: FA	MGP impacts to Cloud Branch and Lake Monroe. EPA lead. Superfund Alternative Site. PRP funded. Special Notice Letters sent to FPUC, Florida Power Corp., FP & L, Atlanta Gas Light Co. & City of Sanford (Sanford Group). HRS package completed 8/97. AOC for RI/FS signed 4/98. FS for OU 1 (soils) & OU 2 (GW) completed 1/00 & 2/00. EPA ROD for OU1 & OU 2 completed 7/00 & 6/01. OU 1 soil (excavate w/ thermal treat). OU 2 GW (NAM-10 years). DSAP fieldwork completed 6/02 with DSAR in 12/02. Additional soil contamination (4X original) found. OU 1 ROD (AROD) amended 9/06. OU 3 (Cloud Branch Seds) Eco. Risk completed. ROD amendment for OU 3 completed 9/06. Consent Decree 1/09. In situ solidification (OU 1, 3) is the remedial strategy for site. RA activities complete 1st quarter of 2011. Long term GW monitoring is ongoing. EPA is placing institutional controls to restrict digging and GW well installation.EPA plans to complete first 5-Year Review in 2013. Shelby Johnston (404-562-8287) is the EPA RPM Johnston.Shelby@epamail.epa.gov
Cascade Park Gasification Aka: Tallahassee MGP SW corner of Gadsden and Bloxham Streets Tallahassee, FL 32301	NW	COM_67392 BF370001000	C,W	PA-12/1987 SI-10/1988 ESI-6/1997 Recommendation: FA	EPA lead. Superfund Alternative site. Includes adjacent landfill. AOC for EE/CA between COT & EPA signed 11/98. EE/CA completed 2/02. Human Health RA complete. 2/02. Ecological RA completed 2/02. AOC for Removal Action between COT & EPA signed 9/04. Removal Action Work plan 2005. Soil Removal activities completed in 2006. Approximately 347.59 tons of sediment removed from Cascade Creek and 84,551.69 tons of soil removed from shallow and deep excavations. GW NAM ongoing. PRP continues to fund site cleanup, monitoring and oversight activities. As part of Blueprint 2000 project, site to be made into a large public park w/ trails, amphitheater, a baseball field and retention pond. COT performing initial RI/FS activities. COT currently performing a treatability study & will be sending a report of findings to EPA in mid-June 2013. If COT maintains current schedule, a FS study will be completed by November 8, 2013. EPA hopes to issue a ROD for the site by September 30, 2014. Rachel McCullough (404-562-8549)is now the EPA RPM mccullough.rachel@epa.gov
Pensacola Manufactured Gas Plant Cervantes Street & Tarragona Pensacola, FL 32501	NW	COM_69033	W	PA-6/1990 Desk-top SI-3/1993 ESI- 12/1999. Recommendation: FA	EPA OCA, State lead cleanup through FDEP Northwest district. Assessment complete. No SL removal. Monitoring only and natural attenuation ongoing. May request conditional closure. Site is going through the conditional closure process with FDOT and the responsible parties at this time. Conditional closure is expected to be completed by the end of 2013.
Bradenton Manufactured Gas Plant 705 3rd St. W Bradenton, FL 34205	SW	COM_65180 349-1	W,CW	PA-3/1990 SI- 8/1993 IA- 3/1995 Recommendation: NFRAP	Site Archived by EPA 3/95. State lead through FDEP SW District. Continuing with contamination assessment, need additional. Horizontal delineation for GW and SL contamination. Off-site GW sampled and plan is for additional work off-site. As of January 2013, site assessment appears complete. On 1-18-13 SAR approved. Move to RAP stage.

STATUS of FLORIDA MANUFACTURED GAS PLANT SITES
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Plant Address	District	Site ID # Or Folio #	Gas Type	CERCLA Assessment	Comments Re: EPA, County and/or State Enforcement
Central Florida Gas Co. Gasification Plant 1705 7th St. Winter Haven, FL 33880	SW	COM_65250	CW	PA-12/1989 Desk-top SI- 9/1991 Recommendation: FA	MGP impacts in Lake Shipp located immediately west of site. Site Reassessment ongoing by EPA. ESI start needed. However, EPA assigned OCA. State action under FDEP SW Dist. 2/90 State and PRP enter into Consent Order. Remedial action underway for the on-site SL and GW contamination. Delay related to finalizing the assessment of impact to biota in Lake Shipp, and risk assessment is ongoing. An offsite portion of the property scheduled for remediation was held up due to site access issues. Using bio-sparging and periodic soil-vapor extraction for remediation since 2002. 1/2013 FDEP notes RAP not working and requests a RAP modification. Some areas of MGP have seen significant cleanup, while some northern and southern areas are still contaminated. Southwestern part of site has offsite contamination plume to be further delineated. MGP Site In compliance.
Clearwater Coal Gasification Plant 400 Myrtle Street Clearwater, FL 33756	SW	COM_65207	W,CW	PA-9/1989 SI 7/1990 Recommendation: NFRAP	Site Archived by EPA 7/90. State lead through FDEP SW District. Delineation of vertical and horizontal extent of GW contamination has not been completed. Delineation of soil contamin. Not completed. Add. Assessment (incl. vertical delineation) required before a RAP can be proposed. Executed Consent Order OGC #93-0230. 4/03-Site referred back to FDEP Federal Programs Section for possible CERCLA reevaluation. 8/03 HRS reevaluation conducted using new information. Based on reevaluation, site recommended for further CERCLA evaluation. Jan 2008 – FDEP offered agreement to forego additional on-site vertical GW delineation if PRP continues to monitor perimeter Floridan wells (CAR will be approved); PRP agreed with this and can now proceed to RAP stage. FDEP approved a 4-task Pilot Study WP to allow University of Waterloo to conduct pilot test remediation using in situ chemical oxidation using sodium persulfate. In compliance.
Lakeland Gas Plant Aka: Peoples/TECO Gas System 445 Kathleen Rd. Lakeland, FL 33815	SW	COM_65245	W	PA-3/1990 SI- 11/1992 ESI- 10/1998 Recommendation: FA	EPA OCA, State Lead. Source Removal by FP & L in 1997-98. Tar under Kathleen Road. Site Reassessment ongoing by EPA. Little progress finalizing the assessment portion of this site. Request made to collect a GW from an offsite area, but this has not occurred. FDOT does not have current plans to remove the portion of Kathleen Road where the tar is still present, but FDEP doesn't have any way to gain assurance that it won't be removed in the future. Still working with FDOT on that aspect. SWD files indicate last correspondence from FPL was request for meeting to discuss scope of additional GW & SL sampling. Pump & Treat GW remediation system in place. In 2006 DOT discussed their bypass construction on part of site. SWD not actively managing site. Last communication regarding site was emails with Jim McCarthy in Tallahassee in January 2010. FDEP will revisit site enforcement history.
Peoples Gas Site/ Florida Suncoast Dome 1800 9th Ave. N St. Petersburg, FL 33713	SW	COM_220490 BF529901000 BF529901001	W,CW	PA-11/1988 SI- 2/1990 Recommendation: FA	Source removal. EPA assigned OCA. State lead through FDEP SW Dist.- In monitoring only stages for GW and SW contamination. Need to execute deed restriction for contaminated soils left in place. Additional SL removal completed in 2010 & GW NAM continuing. Additional SL sampling being conducted – site current as of 1/2013.
Peoples Gas System Aka: Tampa Former MGP 1200 North 13th Street Tampa, FL 33605	SW	COM_65122	W,CW	PA-8/1987 SI- 10/1991 Recommendation: NFRAP	EPA archived site in 1996. State Lead. Site handled by FDEP SW district. Still completing contamination assessment. May 2003 source removal completed to 6' bls involving removal of tar from around buildings on-site. 11/2009-TECO identifies data gaps. Additional SL and GW assessment conducted 2009-2012. Still pursuing completing delineation of contamination of SL vertically and laterally off-site; GW delineation appears complete both vertically and horizontally.

STATUS of FLORIDA MANUFACTURED GAS PLANT SITES
March 2013

Plant Address	District	Site ID # Or Folio #	Gas Type	CERCLA Assessment	Comments Re: EPA, County and/or State Enforcement
Aventura Gasworks Dump Aka: Binnings Pan American Intersection of NE 28th Ct and NE 185th St. (SE of this intersection)	SE	COM_299239 2822030000250	Unk possibly W, CW	PSA-11/2009 APA-12/2009 SI-10/2010 Recommendation: FA	Dump area used by nearby MGP for disposal of MGP wastes (i.e. tars, purifier wastes, etc). PRP completed source removal of former Binnings Pan American facility (Merco Group/Aventura Landings) portion of site in 2002. During PSA and APA process FDEP determines additional areas of MGP dump still exist. During SI, FDEP finds soil and GW contamination by VOCs and SVOCs on Biscayne Institute/Academy & Admiral Point Condominiums part of site. Possible MGP impacts to northwestern edge of Little lake Maule. MDERM/PERA assumes responsibility of Biscayne Institute/Academy (GSOMR, LLC) part of site requiring additional soil sampling and institutional controls. 4/2010 DERM conducts SL sampling of Biscayne Institute/Academy. 9/2012 GSOMR submits Partial Engineering Control Implementation Report to PERA. Plan documents completion of clean fill engineering control. 11/2012. PERA notifies GSOMR of fencing restriction requirements and/or an engineering control.
Ft. Lauderdale Gasification Aka: Peoples Gas System Cox Plant 398 NW 7th Ave. Ft. Lauderdale, FL 33311	SE	COM_54031	W	PA-3/1990 No SI completed Recommendation: NFRAP	Site Archived by EPA 3/90. Lead through Broward County Environmental Program. Some soil removal. Quarterly Monitoring. After Fourth Quarter results, Site given no further action by Broward County in 3/94.
Peoples Gas System Inc. (North Miami Beach) 15779 West Dixie Hwy N. Miami Beach, FL 33162	SE	COM_57754 0722160000380	W,CW	PA-8/1986 SI3/1990 Recommendation: NFRAP	Site Archived by EPA 1/96. CO between FDER, DERM and PRP. Update by PAW 4/29/09, Extensive SL removal over the years. Additional site assessment activities by PRP, including SL borings and deeper GW monitoring and GW elevation from all wells. Meeting held with PRP / DERM / FDEP 12/2008. Additional delineation needed & options to deal with contamination beneath major railroad corridor. Status Report due 6/2009. 2009-Remedial Strategy is next step. PERA is co-reviewing project activities with the DEP/SED. Note that Dixie Highway, US 1, was widened. 1/2013 Delineation of SL & GW plumes mostly completed to propose and approve a Remedial strategy for the Western Parcel. A BSRA is being pursued for the Western Parcel. Removal of contaminated SLs in the Western Parcel has been proposed with hydra-seeding. Trees have been removed prior to initiating the Source Removal activities. Updated by GS on 01/10/2013.
Peoples Gas/Miami Rinker Aka: CEMEX-Downtown Miami-Ready Mix 1600 North Miami Avenue Miami, FL 33136	SE	COM_71973 8505868 0131250481140	O,W	PA-3/1990 Recommendation: NFRAP	Site lead by PERA. Enforcement was pending by PERA. However, petroleum waste detected & referred to State Petroleum Cleanup program. Currently in State Petroleum tanks program. SARA for MGP portion of site submitted to DERM in 10/2008. SARA review comments 3/2009. SARA 2 due 5/2009. RAP due 5/2009. Likely co-mingled petroleum and coal tar GW plume. 6/2009 CEMEX moves off-site. 7/2009 Pilot Study Work Plan submitted Re: FP NAPL removal. 2/2012 PERA request Interim Source Removal. 6/2012 supplemental surface SL results submitted. 9/2012 PERA notifies PRP that GW plume not fully delineated. 12/2012 Remedial GW report issued. 3/2013 PERA request additional information Re: report Tom Kux is PERA Project Manager305/372-6250
WPB Manufactured Gas Plant Aka: Florida Public Utilities Inc. 209 2nd St. West Palm Beach, FL 33401	SE	COM_48354 630-1	W	PA-9/1989 Desk-top SI- 7/1991 Recommendation: FA	EPA OCA, Private Party Lead Cleanup. Consent Order State action under FDEP Southeast District. Update by PAW 4/29/2009, Additional on-going site assessment activities by PRP, including SL and GW assessment, FS submitted in 11/2006, comments sent, revised FS prepared, in review and options being considered as of 4/2009.Following the submittal of a FS, FPU was merged with Chesapeake Utilities Corporation. Thereafter, the approach to cleanup took a more aggressive path by proposing a pilot project for the Eastern parcel, while monitoring the GW. An IRAP has been approved for the eastern parcel on 4/8/12. Based on the results of this Pilot project, a RAP would be submitted for the rest of the site. The SVE and sparging into the shallow points started in 1/2013. GW Monitoring continues.

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March 2013

Plant Address	District	Site ID # Or Folio #	Gas Type	CERCLA Assessment	Comments Re: EPA, County and/or State Enforcement
Ft. Myers Coal Gasification Plant 2600 Anderson Avenue Ft. Myers, FL 33916	S	COM_74062 BF369901000 BF369901001	W	PA-11/1989 SI- 9/1992 Reassessment 10/2002 Recommendation: NFRAP	Consent Order between City and FDEP. Site lead FDEP South District. Source removal and GW treatment and monitoring conducted early 2000's. Gas Holder/Gasometer removed mid-1990s. Soil excavation removed 10,000 tons of MGP impacted soils. June 2002, dual-phase vacuum enhanced treatment system commenced operation. 300,000 gallons of water treated thus far. Site designated as a Brownfield and remediating under a BSRA. Portion of site redeveloped with children's museum (Imaginarium). Groundwater remediation successfully completed in 2004. NFA with Institutional Controls proposed in 2005; Impervious soil cap constructed. 1/2013 City of Ft Myers recorded an approved restrictive covenant. NFA with institutional controls and SRCO with conditions issued.
Former Key West Gasification Plant Aka: Suburban Propane 726 Catherine St. Key West, FL 33040	S	COM_303264 616-1	O,W,CW	PA-9/1990 Desktop SI- 10/1993 Recommendation: NFRAP	Site Archived by EPA 10/93. State lead is FDEP-South district. PCAR completed 2/93. SL contamination confirmed. Underlying Miami Oolite limestone likely impacted. NAPL discovered. Coal tar diesel fuel wastes detected. No known source removal. Suburban Propane current owner. No viable PRP. PRP search by FDEP in early 2000's did not yield a viable PRP associated with MGP operations. FPU and Suburban Propane later identified as PRPs. 2009-10, FDEP SIS conducts PCA. PAHs, BETX, TRPHs & Sr found above GCTLs in GW. TRPHs & BaP TE found in soils above SCTLS.9/11 WP for additional GW and SL assessment & GW monitoring program. 10/12 RAP approval Order issued by FDEP for one year NAM program. First NAM event 3/13
Key West Gas & Electric Aka: Keys Energy Services Substation 101-111 Geraldine St. & 709 Fort St. Key West, FL 33040	S	COM_303264	O	PSA-1/2011 APA-10/2011 SI- 8/2012.	MGP operated late 1880's to early 1890's before relocating to Catherine Street (MGP Site # 3). Separate State petroleum program involvement. MGP/petroleum impacts (i.e. staining, odors) noted in SL & GW during SI. Arsenic, lead & PAHs (benzo [a] pyrene, dibenzo [a, h] anthracene) detected in soils. Isopropylbenzene, acenaphthene and naphthalene were detected in on-site groundwater above GCTLs. Site did not score on HRS. 11/2012 Site referred to South District for possible enforcement.

Links to electronic databases for additional Information:

FDEP Oculus: http://dwmedms.dep.state.fl.us/Oculus/servlet/login
Miami Dade County PERA em Power: http://derm.miamidade.gov/NetFYI/cgi/NetFYICgi.EXE?METHOD=ViewLogin
Broward County Site Inventory Report: http://www.broward.org/PollutionPrevention/ContaminatedSites/Pages/AssessmentRemediation.aspx

STATUS of FLORIDA MANUFACTURED GAS PLANT SITES
March 2013

Key to Abbreviations and Acronyms

AOC	=	Administrative Order on Consent (EPA)
APA	=	Abbreviated Preliminary Assessment
BaPTE	=	Benzo [a] pyrene toxic equivalents
BSRA	=	Brownfield Site Rehabilitation Agreement
BTEX	=	Benzene, Ethyl benzene, Toluene & Xylene
C	=	Coal Carbonization
CAR	=	Contamination Assessment Report
CO	=	Consent Order
COJ	=	City of Jacksonville
COSA	=	City of St. Augustine
COT	=	City of Tallahassee
CW	=	Carbureted water gas
Cyn	=	Cyanide
DERM	=	Dade Co. Environmental Resources
Desktop	=	Used PRP data
DSAP	=	Design Sampling & Analysis Plan
DSAR	=	Design Sampling & Analysis Report
DW	=	Drainage well
EE/CA	=	Engineering Evaluation/Cost Analysis
ESI	=	Expanded Site Inspection (CERCLA)
FDER	=	Florida Dept. of Environmental Regulation
FDEP	=	Florida Dept. of Environmental Protection
FA	=	Further Action
FP	=	Free Product
FPUC	=	Florida Public Utilities Corp.
FP&L	=	Florida Power and Light
FS	=	Feasibility Study
GAC	=	Granulated Active Carbon
GW	=	Groundwater
HASP	=	Health and Safety Plan
HRS	=	Hazard Ranking System
IA	=	Integrated Assessment
IRA	=	Interim Remedial Action
IRAP	=	Interim Remedial Action Plan
LSI	=	Listing Site Investigation
MGP	=	Manufactured Gas Plant
NAM	=	Natural Attenuation Monitoring
NAPL	=	Non Aqueous Phase Liquid
NFRAP	=	No Further (CERCLA) Remedial Action Planned
NOAA	=	National Oceanic and Atmospheric Administration
NPL	=	National Priorities Listing
O	=	Oil gas
OCA	=	Other Cleanup Activity (EPA Deferred to State or County Lead)
OU	=	Operable Unit
PA	=	Preliminary Assessment (CERCLA)

PAHs = Polynuclear aromatic hydrocarbons
PAR = Preliminary Assessment Reassessment
PAW = Paul A. Wierzbicki FDEP WPB District Office
PCA = Preliminary Contamination Assessment
PCAR = Preliminary Contamination Assessment Report
PERA = Miami- Dade County Permitting, Enforcement & Regulatory Affairs
PRP = Potential Responsible Party
PSA = Pre-CERCLIS Screening Assessment

RA = Risk Analysis
RAI = Request for Additional Information
RAP = Remedial Action Plan
RI = Remedial Investigation
ROD = Record of Decision
RP = Responsible party
RPM = Remedial Project Manager
SARA = Site Assessment Report Addendum
SAR = Site Assessment Report
Sed = Sediment
SI/SSI = Site Inspection/Site Investigation (CERCLA)
SIS = Site Investigation Section
SL = Soil
SED = Southeast District
Sr = Strontium
SVE = Soil Vapor Extraction
SW = Surface Water
SWD = Southwest District
TM = Technical Memorandum
TRPHs = Total Recoverable Petroleum Hydrocarbons
Unk = Unknown
VI = Vapor Intrusion
W = Water Gas
WP = Work Plan

Compiled by
A. James McCarthy Jr., P.G
Professional Geologist II
Florida Department of Environmental Protection
Bureau of Waste Cleanup
CERCLA Site Screening Section
Jim.mccarthy@dep.state.fl.us

STATUS of FLORIDA MANUFACTURED GAS PLANT SITES
March 2013

Florida MGP
Summary Status 2013

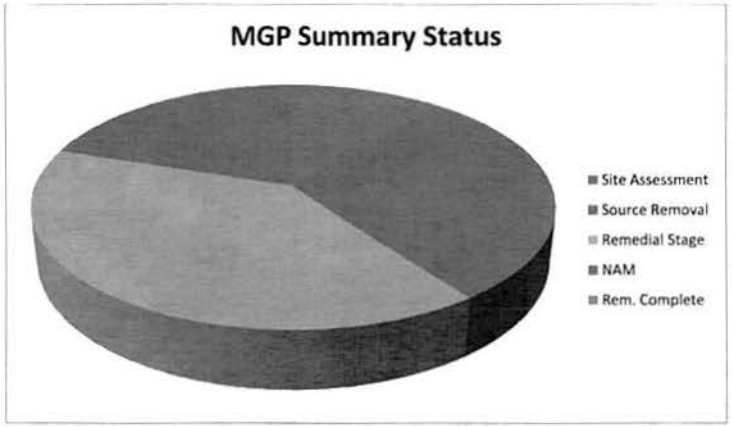
Sites still in Site Assessment Stage	Sites IRA, Soil Removal, Solidification or Free Product Recovery	Remedial Activities on-going[1]	Natural Attenuation Monitoring On-going	Remediation Complete[2]
5	13	18	9	6

[1] All remedial efforts for the MGP sites are funded by potential responsible parties (PRP) through either State Consent Orders or EPA Agreement on Consent Orders.

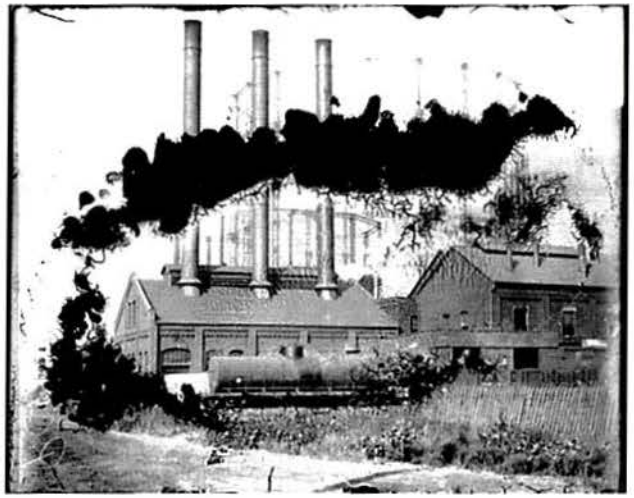
[2]The six completed Remediation Sites are Riverfront MGP (Palatka), St. Augustine Gas Plant, the two Deland Sites, Ft Lauderdale Gasification (Cox Plant) and Ft Myers Gasification Plant site.

J. McCarthy, PG
FDEP-3/22/13

STATUS of FLORIDA MANUFACTURED GAS PLANT SITES
March 2013



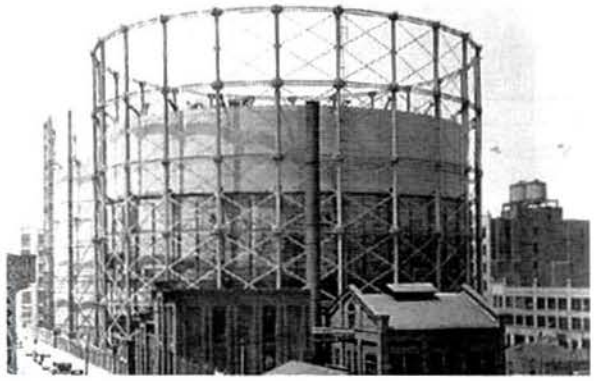
Various Depictions of MGPs



A coal-gas plant serving the Chicago area in 1909. Notice the retort building (smokestacks) and two large support cylinders for gasometers (gas storage units) behind it. These facilities typically had rail access.

STATUS of FLORIDA MANUFACTURED GAS PLANT SITES
March 2013

Rockaway Park MGP Queens, New York

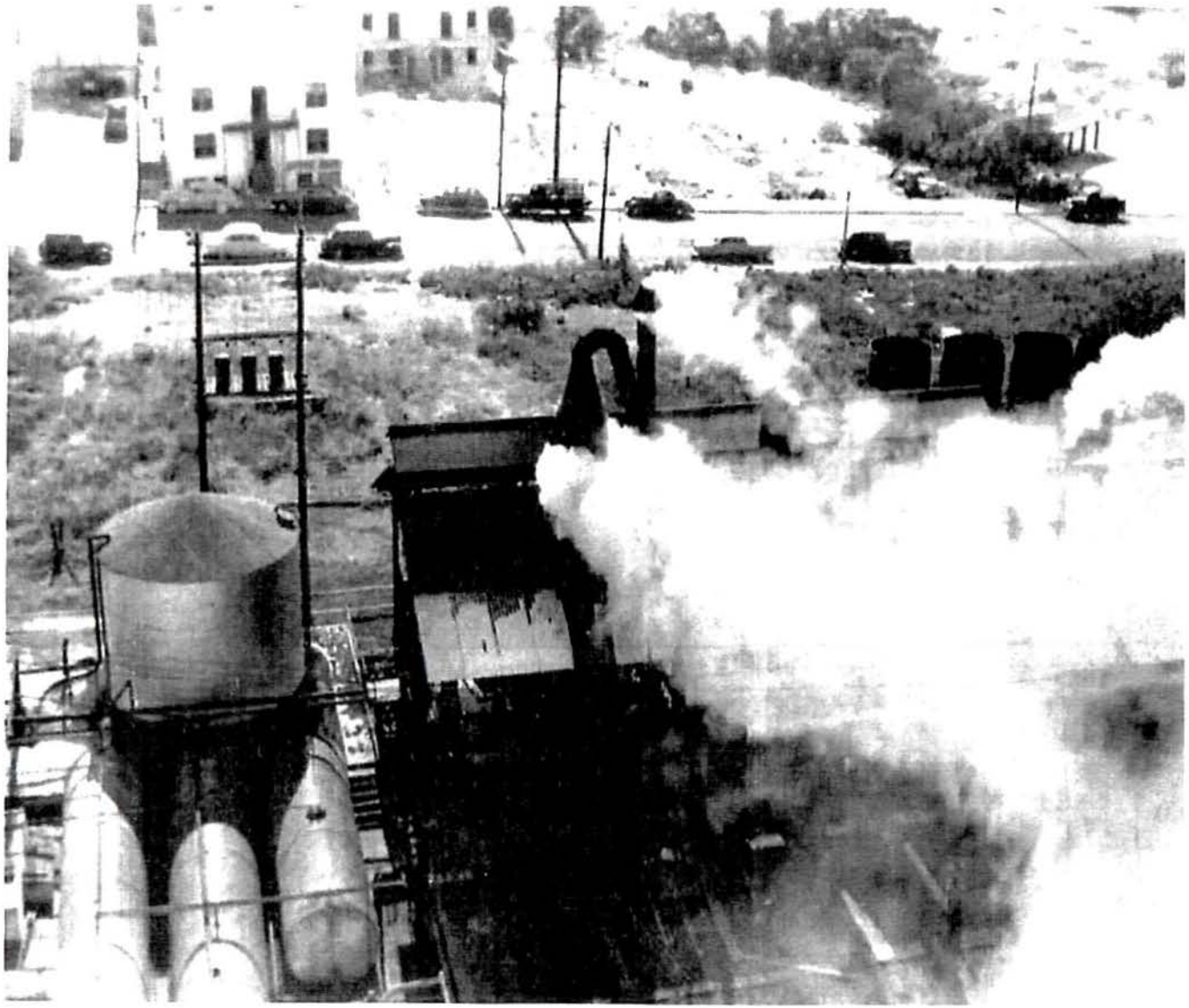


STATUS of FLORIDA MANUFACTURED GAS PLANT SITES
March 2013

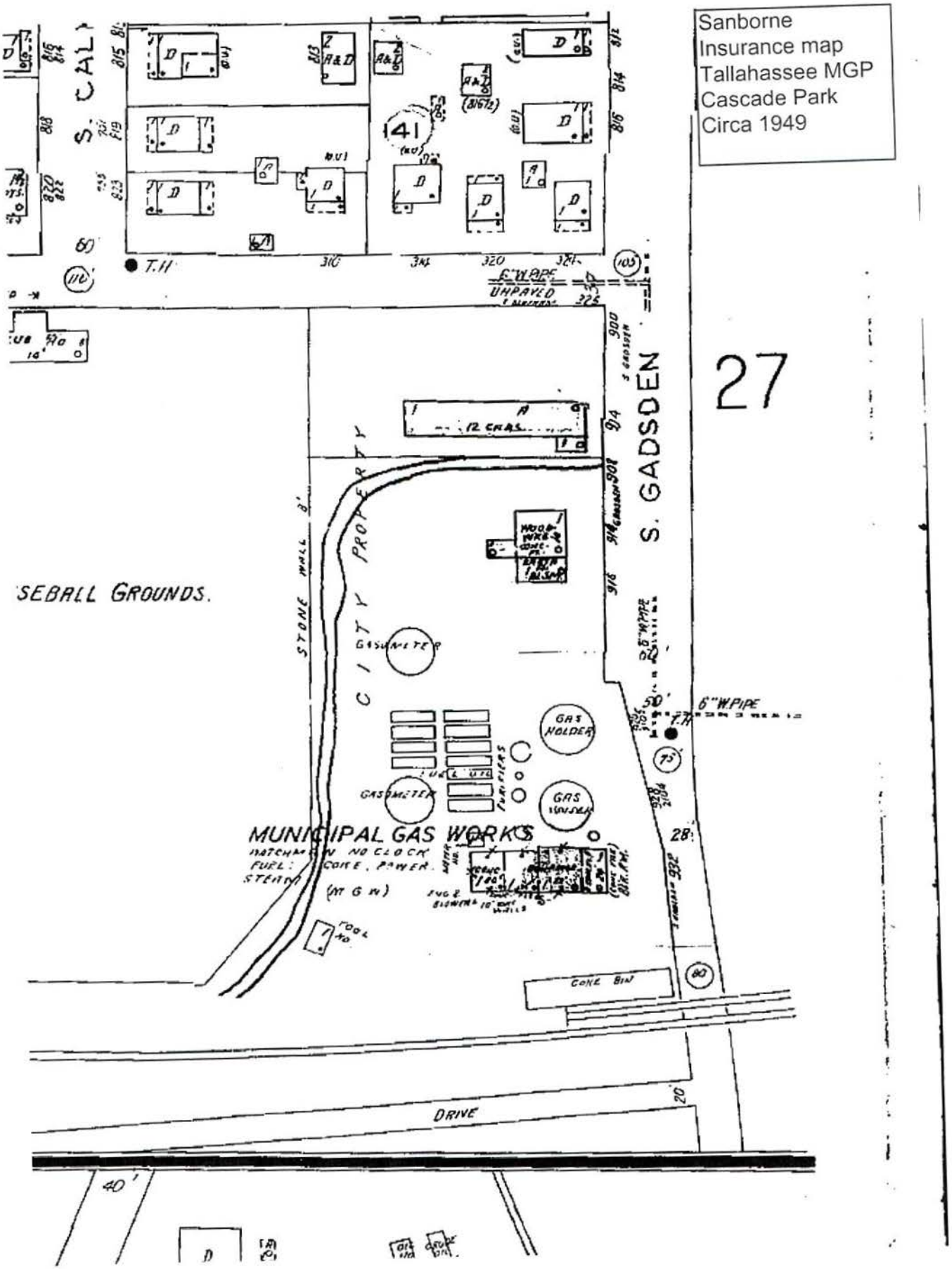
Former West 65th Street Gas Holder (Circa 1936)

MGP Wastes

West Palm Beach
MGP Operation



Sanborne
Insurance map
Tallahassee MGP
Cascade Park
Circa 1949



1957
Tallahassee MSP

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 4
ATLANTA FEDERAL CENTER
61 FORSYTH STREET
ATLANTA, GEORGIA 30303-8960

APR 7 1999

Ms. Mary Jean Yon, Director
Division of Waste Management
Florida Department of Environmental Protection (FLDEP)
Bob Martinez Center
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

Dear Ms. Yon:

The purpose of this letter is to solicit the position of the State of Florida on the listing of the Main Street Manufactured Gas Plant (MGP) Site (Site) in Jacksonville on the National Priorities List (NPL). The U.S. Environmental Protection Agency (EPA) is in the process of evaluating the Main Street MGP Site for releases of hazardous substances, pollutants or contaminants under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). Based on our initial evaluation of such releases at the Main Street MGP Site, EPA believes the Site poses a significant threat to public health and the environment.

The Main Street MGP Site includes 901 North Main Street, which now contains a former hotel, and the City of Jacksonville's Confederate Park. Coal slag, staining, and black oil have been observed in different surface and subsurface soil borings from these properties. Surface soil samples have contained concentrations of polynuclear aromatic hydrocarbon compounds, which are tar by-products, arsenic, cyanide, and lead exceeding Florida soil cleanup target levels for direct exposure based on residential use. Benzene and lead have been found in groundwater samples at concentrations exceeding state maximum contaminant levels. The soil exposure, surface water and groundwater migration pathways are of potential concern. Approximately six City of Jacksonville water supply wells are located within a half mile radius of the Site. Two wells are located down-gradient of the Site, at approximate distances of 1/4 and 3/8 miles.

There are likely ecological risks posed by the Site to the St. Johns River biota and wildlife. According to historical evidence at other MGPs, prior to tar distillation efforts, lighter fractions of tar were commonly discharged to a nearby water body. The highest contaminant concentrations on the park property have been detected along its former creek bed. This creek flows into the St. Johns River approximately a mile downstream of the park. The St. Johns River is utilized for commercial and recreational fishing and it is a federally designated critical habitat for the endangered West Indian manatee. In addition to manatees, other threatened and endangered species, and species of special concern are present along this downstream portion of the St. Johns River.

Due to the known MGP contaminants at Confederate Park, the high density of population in the area, the concentrations of contaminants, the nearby proximity of the City well field, the use of the creek as a recreational "cane-pole" fishing area, and the potential risk to

downstream commercial fisheries and sensitive environments this Site warrants Superfund listing.

EPA has completed a draft Hazard Ranking System (HRS) package for this Site, indicating that this site qualifies for proposal to the NPL. EPA has maintained close communications with FLDEP throughout our evaluation process. To further coordinate with the State on the NPL listing decision process, we are soliciting the State's written support for EPA to proceed with the NPL listing process for this site.

This letter, therefore, solicits from the FLDEP Secretary, the State's position on proposing the Main Street MGP Site to the NPL. Please respond to:

Mr. A. Stanley Meiburg
Acting Regional Administrator
U.S. Environmental Protection Agency
61 Forsyth Street, SW
Atlanta, Georgia 30303-3104

We would appreciate a quick response so that EPA may move forward expeditiously in the listing process. The deadline for receipt of the State's concurrence is June 15, 2010. We anticipate the next NPL update to occur in September 2010.

EPA will continue working closely with FLDEP to ensure that our common goal of protecting public health and the environment is fully realized. Should you require additional information, please do not hesitate to contact me at (404) 562-8599 or have your staff contact Jennifer Wendel, Region 4 NPL Coordinator, at (404) 562-8799.

Sincerely,

for Franklin E. Hill, Director
Superfund Division

cc: Mr. Doug Jones, FDEP
Ms. Terry Jeng, EPA-OSRTI

TETRA TECH

April 8, 2010

Ms. Jennifer Wendel
National Priorities List (NPL) Coordinator
U.S. Environmental Protection Agency (EPA)
61 Forsyth Street, SW 11th Floor
Atlanta, GA 30303

Subject: **Hazard Ranking System Documentation Record, Revision 0**
Main Street Manufactured Gas Plant
EPA Contract Number (No.) EP-W-05-054
EPA Identification No. FLSFN0407139
Technical Direction Document (TDD) No. TTEMI-05-003-0075

Dear Ms. Wendel:

The Tetra Tech Superfund Technical Assessment and Response Team (START) is submitting the Hazard Ranking System (HRS) documentation record, revision 0, for Main Street Manufactured Gas Plant located in Jacksonville, Duval County, Florida. This submittal includes the following on compact disc:

- HRS documentation record (Microsoft Word and portable document format [PDF])
- NPL Characteristics Data Collection Form (Microsoft Word)
- References (PDF)

At your request, Tetra Tech submitted one complete electronic copy of the HRS documentation record and references on compact disc to CSC Systems and Solutions for EPA Headquarters quality assurance review. Hard copies of oversized maps are also included in the submittal to CSC Systems and Solutions.

Please contact me (Sandra Harrigan) at (678) 775-3088 if you have any questions or comments regarding this submittal.

Sincerely,

Sandra Harrigan
START III Project Manager

Scott Covode for Andrew F. Johnson
START III Program Manager

Enclosures

cc: Katrina Jones, EPA Project Officer
Barbara Alfano, EPA Remedial Project Manager
Angel Reed, START III Document Control Coordinator

1955 Evergreen Blvd., Suite 300, Duluth, GA 30096
Tel 678.775.3080 Fax 678.775.3138
www.tetratech.com

NPL Characteristics
Data Collection Form
(Version 3.0, December 2001)

Site Name: Main Street Manufactured Gas Plant

Region: 4 State: Florida

This form should be completed for all sites being proposed for addition to the NPL and included as part of the complete HRS package submitted to EPA Headquarters.

Office of Emergency and Remedial Response
U.S. Environmental Protection Agency

NPL Characteristics Data Collection Form

General Instructions

The NPL Characteristics Data Collection Form is designed to standardize the site information collected for input into the Superfund NPL Assessment Program (SNAP) Database. This database serves as a repository for general information about NPL sites and is used to respond to queries about NPL sites from a variety of sources including the general public, the press, other government agencies, and members of Congress. The primary source materials for completing this form are Regional site file documents (e.g., Preliminary Assessment (PA) and Site Investigation (SI) reports), along with the site's Hazard Ranking System scoring package. Although much of the information needed to complete the form is expected to be available in the HRS scoring package, other sources in a site file may need to be consulted for some questions. If definitive data are not available in the site file to answer a question, estimates based on best professional judgment and other sources of information are acceptable.

As you complete the NPL Characteristics Data Collection Form, keep the following points in mind.

- Use the most current information available (e.g., SI-level information has priority over PA-level information).
- Try to use the listed response options when answering a question, and use "unknown" and "other" responses ***only*** when absolutely necessary. If, however, the available response options for a question are not adequate to accurately describe the site, use the "other" response and provide a brief explanation in the space provided.
- Use the margins to explain responses that do not match listed response options or to provide clarifying information. If you need additional room to clarify responses, use the space provided in Appendix D.
- Some questions may go beyond the scope of the HRS scoring package (e.g., may relate to pathways not scored). Answer these questions with the best information available, making reasonable "educated guesses" if necessary.
- "Current," as used in this form, should be interpreted as the general time period of HRS scoring package preparation.
- "Principal contamination," as used in this form, should be interpreted as the contamination that is primarily responsible for a site's proposal to the NPL.

Please respond to ***all*** questions with the answer that you believe best represents the site conditions, given the information available at the time of HRS scoring package preparation.

1. Basic Identifying Information

1.1 **SITE NAME** (as shown on HRS Documentation Record): Main Street Manufactured Gas Plant

SITE ALIASES (if any):

1.2 **CERCLIS ID NUMBER** (12 digits): FLSFN0407139

Are there any other sites associated with this site? Please list their CERCLIS ID numbers:

No

1.3 **SITE ID** from CERCLIS3/WasteLAN (7 digits):

1.4 **CERCLIS SITE SPILL ID** (4 digits): A42A

1.5 **NAME OF PERSON(S) COMPLETING FORM:** Shanna Davis

AFFILIATION (agency/company): Tetra Tech

PHONE NUMBER: (678) 775-3109

1.6 **DATE FORM WAS COMPLETED** (mm/dd/yyyy): 04/08/2010

1.7 **SITE LOCATION.**

Address or General Site Location: 901 North Main Street

City: Jacksonville State: FL

County: Duval Zip Code of Facility: 32202

Congressional District(s): 3rd EPA Region: 4

Congressional District Representatives: Corrine Brown

1.8 **SITE COORDINATES.** Coordinates in degrees, minutes, seconds, and tenths of seconds and decimal degree formats: *If known, please provide site boundary polygon data in Appendix A.*

30°	19'	59"	0.52"	North Latitude	81°	39'	19	00"	West Longitude

If tenths of seconds are unknown, use "0" as a default value. If necessary, refer to Appendix E of EPA's 1991 PA guidance document for directions on how to determine coordinates.

Description of Site Reference Point for Coordinates:

Center of the property in an area of contaminated soil where gas holders were located during

MGP operations

Description Category. Describe the category of feature referenced by the site coordinates.

- ☐ Administrative building
- ☐ Air monitoring station
- ☐ Air release
  - ☐ Stack
  - ☐ Vent
- ☐ Atmosphere emissions treatment unit
- ☐ Center of facility
- ☐ Facility centroid
- ☐ Lagoon or settling pond
- ☐ Liquid waste treatment unit
- ☐ Loading area centroid
- ☐ Loading facility
- ☐ Northeast corner of land parcel
- ☐ Northwest corner of land parcel
- ☐ Plant entrance
  - ☐ General
  - ☐ Personnel
  - ☐ Freight
- ☐ Process unit
- ☐ Process unit area centroid
- ☐ Solid waste treatment/disposal unit
- ☐ Solid waste storage area
- ☐ Southeast corner of land parcel
- ☐ Southwest corner of land parcel
- ☐ Storage tank
- ☐ Water monitoring station
- ☐ Water release pipe
- ☐ Well
- ☐ Well protection area
- ☐ Within limits of groundwater plume
- ☒ Other (specify) Center of property, previous location of gas holders
- ☐ Unknown

Method of Collection. Describe the method used to determine the site coordinates.

- ☐ Address matching
  - ☐ Block face
  - ☐ Digitized
  - ☐ House number
  - ☐ Nearest intersection
  - ☐ Primary name
  - ☐ Street centerline
  - ☐ Other (specify) _____
- ☐ Census
  - ☐ Block - 1990 - centroid
  - ☐ Block/group - 1990 - centroid
  - ☐ Block tract - 1990 – centroid

- ☐ Other (specify) _____
- ☐ Classical surveying techniques
- ☐ Global Positioning System (GPS)
  - ☐ Carrier phase kinematic relative positioning technique
  - ☐ Carrier phase static relative positioning technique
  - ☐ Code measurements (pseudo range) differential (DGPS)
  - ☐ Code measurements (pseudo range) precise positioning service
  - ☐ Code measurements (pseudo range) standard positioning service SA off
  - ☐ Code measurements (pseudo range) standard positioning service SA on
- ☐ Interpolation
  - ☐ Map
  - ☐ Photo
  - ☐ Satellite
  - ☐ Other (specify) _____
- ☐ Loran C
- ☐ Public land survey
  - ☐ Footing
  - ☐ Quartering
- ☐ Zip code centroid
- ☒ Other (specify) Google Maps
- ☐ Unknown

Accuracy Value. Describe the accuracy value as a range (+/-) of the latitude and longitude in meters.

Accuracy: +/- _____ Meters

Vertical Measure. Provide the vertical component of measured point. If no vertical component, leave blank

_____

Horizontal Datum. Describe the reference datum of the latitude and longitude.

- ☐ NAD27
- ☐ NAD83
- ☐ Other (specify) _____
- ☒ Unknown

Source Scale. Describe the scale of the source used to determine the site coordinates.

- ☐ 1:10,000
- ☐ 1:12,000
- ☐ 1:15,840
- ☐ 1:20,000
- ☐ 1:24,000
- ☐ 1:25,000
- ☐ 1:50,000
- ☐ 1:62,500
- ☐ 1:63,360
- ☐ 1:100,000
- ☐ 1:125,000
- ☐ 1:500,000
- ☐ None
- ☐ Other (specify) _____
- ☒ Unknown

1.9 **NAME OF WATERSHED.** Watershed in which the site is located, from Surf Your Watershed at http://www.epa.gov/surf2/locate/: Lower St. Johns Watershed

USGS Hydrologic Cataloging Code (8 digits): 03080103

1.10 **BASIS FOR NPL LISTING.** What is the reason for listing on the NPL?

- ☒ HRS Score. 28.50
- ☐ Agency for Toxic Substances and Disease Registry (ATSDR) Health Advisory
- ☐ State Priority

1.11 **RCRA STATUS.** What is the current RCRA status of the site? (Check all that apply.)

- ☐ RCRA hazardous waste handler not subject to RCRA Subtitle C corrective action
  - ☐ Large quantity hazardous waste generator: Facility that generates over 1,000 kilograms (kg) of hazardous waste, or over 1 kg of acutely hazardous waste per month
  - ☐ Small quantity hazardous waste generator: Facility that generated between 100 kg and 1,000 kg of hazardous waste per month (conditionally exempt)
  - ☐ Transporter: Entity that moves hazardous waste from the generator off-site to a facility that can recycle, treat, store, or dispose of the waste
  - ☐ Protective filer: Facility that has filed a RCRA Part A permit application for treatment, storage, or disposal of Subtitle C hazardous wastes as a precautionary measure only
- ☐ Facility subject to RCRA Subtitle C that meets listing policy
  - ☐ Inability to finance: Facility is owned by persons who have demonstrated an inability to finance a cleanup as evidenced by their invocation of the bankruptcy laws
  - ☐ Unwillingness/loss of authorization to operate: Facility that has lost authorization to operate or for which there are indications that the owner/operator will be unwilling to undertake corrective action; includes loss of interim status (LOIS) facilities
  - ☐ Unwillingness/case-by-case determination: Facility that has a clear history of unwillingness as determined on a case-by-case basis
  - ☐ Converter: Facility that at one time was treating or storing RCRA Subtitle C hazardous waste but has since converted to generator-only status or any other hazardous waste activity for which interim status is not required
  - ☐ Non-filer or late filer: Facility that was treating, storing, or disposing of Subtitle C hazardous waste after November 19, 1980, and did not file Part A of a permit application by the date prescribed in 40 CFR 270.10 and has little or no history of RCRA compliance
  - ☐ Pre-HSWA permittee: Facility that received a RCRA Subtitle C operating permit for the treatment, storage, or disposal of Subtitle C hazardous waste that was issued prior to the enactment of HSWA, and whose owner/operator will not voluntarily consent to the reissuance of their permit to include corrective action requirements
- ☐ RCRA corrective action facility
- ☒ Not applicable (e.g., non-generator or very small quantity generator)

1.12 **SITE PERMITS.** Which of the following permits apply to the site? (Check all that apply.)

- ☐ Air
- ☐ Dredge and fill
- ☐ Marine
- ☐ NPDES (National Pollutant Discharge Elimination System)
- ☐ POTW (Publicly Owned Treatment Works)
- ☐ Radioactive
- ☐ RCRA
- ☐ RCRA interim status

☐ SMCRA (Surface Mining Control and Reclamation Act)
☐ Underground injection

1.13 **ATSDR HEALTH ADVISORY.** Has an ATSDR Health Advisory been issued?
☐ Yes ☒ No If yes, what was the date of issue? _____ mm/dd/yyyy

ATSDR HEALTH ASSESSMENT. Has an ATSDR Health Assessment been conducted?
☐ Yes ☒ No If yes, what was the date of the assessment? _____ mm/dd/yyyy

1.14 **SITE STATUS.** Is the site a Federal Facility or a General site?
☐ Federal
☒ General

1.15 **HOW INITIALLY IDENTIFIED.** How was the site initially identified to EPA? If this information is not available in the HRS scoring package, check the PA narrative or other parts of the site file. (Check one.)
☐ Anonymous
☐ CERCLA notification
☐ Citizen complaint (including PA petition)
☐ Incidental (e.g., identified while discovering/investigating another NPL site)
☐ RCRA notification
☒ State/local program
☐ Other Federal program (specify) _____
☐ Other (specify) _____
☐ Unknown

1.16 **SITE WITH UNKNOWN SOURCE(S).** Does the site consist exclusively of contaminated ground water or contaminated surface water sediments with ***no identifiable primary source(s)***? (Check one.)
☐ Yes, ground water plume(s)
☐ Yes, surface water sediments
☒ No

2. General Site Description

2.1 **DEMOGRAPHIC SETTING.** Characterize the area in which the site is located. (Check one.)
☐ Large city: within boundaries of a city with a population 100,000
☐ Rural: outside of city and suburban areas
☐ Small city/town: within boundaries of a city/town with a population 10,000 and < 100,000
☒ Suburban: within immediate suburbs of a city

2.2 **BORDER SITES.** Is the site within 60 miles of Mexican or Canadian borders?
☐ Yes ☒ No

2.3 **TRIBAL SITES.** Is the site on or near (i.e., within a four-mile radial distance, or for surface water within 15 Ain-water@ miles) Tribal Lands?
☐ Near designated Tribal Lands
Name of Tribe(s): _____
Distance from (in miles): _____
☐ On designated Tribal Lands

Name of Tribe(s): _____

☒ Not on or near Tribal Lands

2.4 **OTHER NPL SITES.** Are there other NPL sites within one mile of the site?

☐ Yes ☒ No

If yes, what sites? _____

2.5 **LAND USE.** What is the current land use(s) within one mile of the site? (Check all that apply.)

☐ Agricultural
☐ Airport
☒ Church
☒ Commercial
☐ DOE (Department of Energy)
☐ Desert
☐ Forest/fields/wetlands/other undeveloped
☒ Highway
☐ Hospital
☐ Indian lands
☐ Industrial
☐ Major excavation
☐ Military
☐ Mining
☐ Oil wells
☐ POTW (Publicly Owned Treatment Works)
☒ Parks/recreation
☐ Pipeline
☐ Prison
☐ Railroad
☒ Residential
☐ Sawmill
☒ School/university/day care
☐ Sink holes
☐ Water works
☐ Other (specify) _____
☐ Unknown

If ***readily available information*** indicates that projected future land use(s) within one mile of the site may ***differ*** from the current use(s) checked above (e.g., building a mobile home park adjacent to a former landfill), write them in the blank that follows. Use the response options listed above if possible.

_____

2.6 **AREA.** What is the approximate area of contamination (i.e., total area that includes all sources of contamination and other areas where contamination has come to be located, plus the area between the sources)? If the site property is large with only a small contaminated portion, only the area of the contaminated portion should be estimated. If the approximate area of contamination cannot be estimated, use the area within the property boundary. (Check one.)

☒ > 5 acres
☐ > 5 and 20 acres
☐ > 20 and 100 acres
☐ > 100 acres
☐ Unknown

2.7 **OWNER AND OPERATOR.** Who are the current owner(s) and operator(s) of the site, and who were the owner(s) and operator(s) at the time of principal contamination? If the owner and operator are the same, then check the same box under AOwner(s)@ and AOperator(s).@ If the current owner and/or operator and the owner and/or operator at time of principal contamination are the same, then check the same box under ACURRENT@ and AAT TIME OF CONTAMINATION.@ For ground water plume and surface water sediment sites with no identified source, the owner and operator at the time of contamination should be AUnknown.@ (Check all that apply, including at least one in each column; ANA@ indicates that a response is not applicable.)

CURRENT			AT TIME OF CONTAMINATION	
Owner(s)	**Operator(s)**		**Owner(s)**	**Operator(s)**
☐	☐	Bankruptcy/receivership	NA	NA
☐	☐	County/city (Madison County Economic Development Authority)	☐	☐
☐	☐	Federal	☐	☐
☐	NA	Government Owned Contractor Operated (GOCO)	☐	NA
☐	☐	Indian lands	☐	☐
NA	☒	None - currently inactive or abandoned	NA	NA
NA	☐	None - spill or other one-time event	NA	☐
☐	☐	Private - individual	☐	☐
☒	☐	Private - industrial/commercial	☒	☒
☐	☐	Private- small business	☐	☐
☐	☐	State	☐	☐
☐	NA	Other (specify) _____	NA	NA
NA	☐	Other (specify) _____	NA	NA
NA	NA	Other (specify) _____	☐	NA
NA	NA	Other (specify) _____	NA	☐
NA	NA	Unknown	☐	☐

2.8 **SPILL/OTHER ONE-TIME EVENT.** Is the site the result of a one-time spill (e.g., truck, rail car, or barge accident) or other one-time event (e.g., one-time illegal dumping), with no other ongoing waste management or waste generation activities on-site? (Check one.)

☐ Yes, specify year of spill/other one-time event _____
☒ No

2.9 **YEARS OF OPERATION.** What are the beginning and ending years of operation at the site? AOperation@ includes any activity occurring at the site (other than site remediation and related site investigation activity), and does ***not*** necessarily have to involve waste generation and/or management. Aggregated sites that have a combination of active and inactive/abandoned operations, and active sites that have had periods of inoperation during their existence, should be considered currently operating. For these sites, indicate the beginning year of their earliest operation. If sites such as these are no longer operating, indicate the beginning year of their earliest operation and the ending year of their latest operation. For ground water plume and surface water sediment sites with no identified source, the years of operation should be AUnknown.@ (Check one.)

☐ Currently operating: from (beginning year) _____

☒ Inactive or abandoned: from (beginning year) 1875 to (ending year) 1913

☐ Unknown (only if ***no*** historical information is available)

2.10 **YEARS OF WASTE MANAGEMENT ACTIVITIES.** What are the beginning and ending years of waste management at the site? Applicable waste management activities include generation, treatment, and/or recycling of waste containing hazardous substances and/or receipt of such wastes from off-site sources. Aggregated sites that have a combination of active and inactive/abandoned waste management activities, and sites that are actively managing waste that have had periods without waste management activities during their existence, should be considered currently managing waste. For these sites, indicate the beginning year of their earliest waste management activity. If sites such as these are no longer managing waste, indicate the beginning year of their earliest activity and the ending year of their latest activity. All responses should be consistent with responses given for question 2.9. For ground water plume and surface water sediment sites with no identified source, the response should be AUnknown.@ (Check one.)

☐ Currently managing waste: from (beginning year) _____

☒ No longer managing waste: from (beginning year) 1875 to (ending year) 1913

☐ Unknown (only if ***no*** historical information is available)

3. Site Type

3.1 **PRIMARY SITE ACTIVITY TYPE.** Which of the following best describes the primary activity at the site? The primary site activity type is defined as the main operation that is taking place, or has taken place, at the site and was a major contributor of the hazardous substance releases that caused the site to be considered for the NPL. The primary site activity types are defined in Appendix B. There are five major categories for primary site activity type and each of these categories has many sub-categories. Please select only one category (e.g., Mining) and only one sub-category within the category (e.g., Metals). For ground water plume sites with no identified source, the response should be AOther, Ground water plume.@ For surface water sediment sites with no identified source, the response should be AOther, Surface water sediment site.@ If the site has a secondary site activity type, please list it in the space provided below. (Select one type.)

☒ Manufacturing/processing/maintenance

- ☐ Chemicals and allied products
- ☒ Coal gasification
- ☐ Coke production
- ☐ Electronic/electrical equipment
- ☐ Electric power generation and distribution
- ☐ Fabrics/textiles
- ☐ Lumber and wood products/pulp and paper
- ☐ Lumber and wood products/wood preserving/treatment
- ☐ Metal fabrication/finishing/coating and allied industries
- ☐ Oil and gas refining

- ☐ Ordnance production
- ☐ Plastics and rubber products
- ☐ Primary metals/mineral processing
- ☐ Radioactive products
- ☐ Tanneries
- ☐ Trucks/ships/trains/aircraft and related components
- ☐ Other (specify) _____

☐ Mining
- ☐ Coal
- ☐ Metals
- ☐ Non-metal minerals
- ☐ Oil and gas
- ☐ Other (specify) _____

☐ Recycling
- ☐ Automobiles/tires
- ☐ Batteries/scrap metal/secondary lead smelting/precious metal recovery
- ☐ Chemicals/chemical wastes (e.g., solvent recovery)
- ☐ Drums/tanks
- ☐ Waste/used oil
- ☐ Other (specify) _____

☐ Waste management
- ☐ Co-disposal landfill (municipal and industrial)
- ☐ Illegal disposal/open dump
- ☐ Industrial waste facility (non-generator)
- ☐ Industrial waste landfill
- ☐ Mine tailings disposal
- ☐ Municipal solid waste landfill
- ☐ Radioactive waste treatment, storage, disposal (non-generator)
- ☐ Other (specify) _____

☐ Other
- ☐ Agricultural (e.g., grain elevator)
- ☐ Contaminated sediment site (with no identified source, must also answer yes to question 1.16)
- ☐ Ground water plume (with no identified source, must also answer yes to question 1.16)
- ☐ Military
- ☐ Product storage/distribution facility
- ☐ Research, development, and testing facility
- ☐ Retail/commercial
- ☐ Spill or other one-time event
- ☐ Spraying or spreading substances for dust control
- ☐ Transportation (e.g., railroad yard, airport, barge docking site)
- ☐ Treatment works/septic tanks/other sewage treatment
- ☐ Other (specify) _____

If the site has one or more *secondary* site activity type(s), please indicate the activity type in the space below. Use the responses above with the addition of AResidential@ as a selection.

_____

3.2 **SITE ACTIVITIES.** Which of the following best describes current activities/operations/conditions at the site (i.e., on-site activities)? Also, identify all former activities that are at least partly responsible for the principal contamination at the site. Check ALL responses that apply, including at least one in each column; if a main category is checked, at least one sub-category also must be checked (e.g., if AFederal facility@ is checked, a sub-category such as ADOE@ also must be checked). For ground water plume sites with no identified source, the response should be AGround water plume.@ For surface water sediment sites with no identified source, the response should be ASurface water sediment site.@

Current	Former	
☐	☐	Agricultural
☐	☐	Federal facility (must also indicate Federal in question 2.7)
☐	☐	DOD
☐	☐	Ordnance production/storage
☐	☐	Testing and maintenance
☐	☐	DOE
☐	☐	DOI (e.g., Bureau of Land Management)
☐	☐	USDA (e.g., Forest Service)
☐	☐	Other (specify) _____
☐	☐	Ground water plume (with no identified source, must also answer yes to question 1.16)
☐	☐	Laundries/dry cleaners
☐	☒	Manufacturing/processing
☐	☐	Chemicals and allied products
☐	☐	Chemicals
☐	☐	Pesticides/herbicides
☐	☐	Other (specify) _____
☐	☐	Electric power generation and distribution
☐	☐	Electronic/electrical equipment
☐	☐	Electroplating
☐	☐	Lumber and wood products
☐	☐	Pulp and paper
☐	☐	Wood preserving/treatment
☐	☐	Other (specify) _____
☐	☐	Metal fabrication/finishing/coating and allied industries
☐	☐	Ore processing
☐	☐	Petroleum refining
☐	☐	Plastic and rubber products
☐	☐	Primary metals/mineral processing
☐	☒	Other (specify) Manufactured gas plant
☐	☐	Mining
☐	☐	Coal
☐	☐	Metals
☐	☐	Non-metal minerals
☐	☐	Oil and gas
☐	☐	Subsurface
☐	☐	Surface
☐	☐	Other (specify) _____
☐	N/A	None/currently inactive or abandoned
☐	☐	Product storage/distribution as ***principal*** activity

☐	☐	Residential
☐	☐	Retail/commercial
☐	☐	Road oiling
N/A	☐	Spill or other one-time event, with no other activities (must also indicate spill in question 2.8)
☐	☐	Surface water sediment site (with no identified source, must also answer yes to question 1.16)
☐	☐	Transportation (e.g., railroad yard, airport, barge docking site)
☐	☐	Waste management
☐	☐	Illegal/open dump
☐	☐	Municipal solid waste landfill
☐	☐	Other industrial waste facility, including landfill (non-generator)
☐	☐	Publicly owned treatment works/septic tanks/other sewage treatment
☐	☐	RCRA Subtitle C TSDF (non-generator)
☐	☐	Radioactive waste treatment, storage, disposal (non-generator)
☐	☐	Recycling
☐	☐	Automobiles/scrap metal/tires
☐	☐	Batteries
☐	☐	Chemicals/chemical wastes (e.g., solvent recovery)
☐	☐	Drums
☐	☐	Used/waste oil
☐	☐	Other (specify)
☒	☐	Other (specify) Abandoned hotel
☐	☐	Unknown

3.3 **WASTE TREATMENT, STORAGE, AND DISPOSAL ACTIVITIES.** What treatment, storage, and/or disposal activities occur/occurred at the site? For ground water plume and surface water sediment sites with no identified source, the response should be Unknown. (Check all that apply.)

- ☐ Discharge to sewer/surface water (intentional permitted or illegal discharge; ***not*** secondary runoff)
- ☐ Drain/leach field
- ☐ Drum/container storage (intentional storage in specified areas)
- ☐ Explosives disposal/detonation
- ☐ Illegal dumping (unpermitted dumping by site owner/operator in undesignated disposal area)
- ☐ Incineration/other combustion activity (including burn pits)
- ☐ Industrial landfill
- ☐ Land application/treatment
- ☐ Leaking containers
- ☐ Municipal landfill (must also indicate municipal solid waste landfill in question 3.2)
- ☐ None/spill or other one-time event (must also indicate spill in question 2.8)
- ☐ Outfall, surface water
- ☐ Recycling (must also indicate recycling in question 3.2)
- ☐ Sand/gravel pit
- ☐ Sinkhole
- ☐ Surface impoundment (primarily liquid)
- ☐ Tank - above ground
- ☐ Tank - below ground
- ☐ Thermal treatment

- ☐ Unauthorized dumping by a party other than the site owner/operator
- ☐ Underground injection well
- ☐ Waste pile (primarily solid, covered or uncovered)
- ☐ Other (specify) _____
- ☒ Unknown

3.4 **SOURCE TYPES.** What HRS source types exist/existed at the site? For ground water plume sites with no identified source, the response should be AGround water plume.@ For surface water sediment sites with no identified source, the response should be ASurface water sediment site.@ (Check all that apply.)

- ☐ Active fire area
- ☐ Burn pit
- ☐ Container or tank
- ☒ Contaminated soil (excluding land treatment)
- ☐ Drum
- ☐ Ground water plume (with no identified source, must also answer yes to question 1.16)
- ☐ Landfarm/land treatment
- ☐ Landfill
- ☐ Piles
  - ☐ Chemical waste pile
  - ☐ Scrap metal or junk pile
  - ☐ Tailings pile
  - ☐ Trash pile
  - ☐ Other (specify)
- ☐ Surface impoundment
- ☐ Surface impoundment (buried/backfilled)
- ☐ Surface water sediment site (with no identified source, must also answer yes to question 1.16)
- ☐ Tank - above ground
- ☐ Tank - below ground
- ☐ Unallocated source
- ☐ Other (specify) _____

4. Waste Description

4.1 **ON-SITE/OFF-SITE GENERATION.** Is an on-site or off-site generator responsible for the waste disposed or deposited on-site that resulted in the principal contamination? For consistency, recycling facilities should be considered on-site generators. (Check one.)

- ☒ On-site generator(s) only
- ☐ Off-site generator(s) only
- ☐ Both on-site and off-site generators

4.2 **ENTITY THAT GENERATED THE WASTE.** What is the source(s) of the waste disposed or deposited on-site that resulted in the principal contamination (***not*** necessarily the entity that generated the original product)? Note that this question is different from question 3.2 regarding site activities, although the response options are similar. This question targets those entities that generated the waste present on-site, not the site activities themselves, regardless of whether those entities are located on- or off-site. However, if the waste is/was generated entirely on-site, then the response(s) to this question should match the response(s) to question 3.2. For ground water plume sites with no identified source, the response should be AGround water plume.@ For surface water sediment sites with no identified source, the response should be ASurface water sediment site.@ (Check all that apply.)

- ☐ Agricultural
- ☐ Construction/demolition
- ☐ Federal facility
  - ☐ DOD
    - ☐ Ordnance production/storage
    - ☐ Testing and maintenance
  - ☐ DOE
  - ☐ DOI
  - ☐ USDA
  - ☐ Other (specify) _____
- ☐ Ground water plume (with no identified source, must also answer yes to question 1.16)
- ☐ Laboratory/hospital
- ☐ Laundries/dry cleaners
- ☒ Manufacturing
  - ☐ Chemicals and allied products
  - ☐ Pesticides/herbicides
  - ☐ Other (specify) _____
  - ☐ Electric power generation and distribution
  - ☐ Electronic/electrical equipment
  - ☐ Electroplating
  - ☐ Lumber and wood products
    - ☐ Pulp and paper
    - ☐ Wood preserving/treatment
    - ☐ Other (specify) _____
  - ☐ Metal fabrication/finishing/coating and allied products
  - ☐ Ore processing
  - ☐ Petroleum refining
  - ☐ Plastic and rubber products
  - ☐ Primary metals/mineral processing
  - ☒ Other (specify) Manufactured gas plant
- ☐ Mining
  - ☐ Coal
  - ☐ Metals
  - ☐ Non-metal minerals
  - ☐ Oil and Gas
  - ☐ Subsurface
  - ☐ Surface
  - ☐ Other (specify) _____
- ☐ Product storage/distribution facility

- ☐ Recycling
  - ☐ Automobile junkyard/scrap metal/tires
  - ☐ Batteries
  - ☐ Chemicals/chemical wastes (e.g., solvent recovery)
  - ☐ Drums
  - ☐ Used/waste oil
  - ☐ Other (specify) _____
- ☐ Residential
- ☐ Retail/commercial
- ☐ Road oiling
- ☐ Site remediation (e.g., wastes from site cleanups)
- ☐ Surface water sediment site (with no identified source, must also answer yes to question 1.16)
- ☐ Transportation (e.g., railroad yard, airport, barge docking site)
- ☐ Waste management (e.g., leachate or ash from waste treatment processes)
- ☐ Other (specify) _____
- ☐ Unknown

4.3 **PHYSICAL STATE OF WASTE.** What is the physical state(s) of the hazardous substance-containing waste(s) deposited or detected on-site? (Check all that apply.)

- ☐ Gas
- ☐ Liquid
- ☐ Sludge
- ☒ Solid
- ☐ Unknown

4.4 **GENERAL WASTE TYPES.** What are the waste types deposited or detected on-site? Indicate all the waste types present on-site under AOverall.@ If three or fewer waste types are known to comprise the majority (i.e., over 50%) of the waste volume on-site, indicate their types under APredominant.@ Otherwise, leave the APredominant@ column blank. (Check all that apply.)

Overall	Predominant	
☐	☐	Chlorinated solvents
☒	☒	Contaminated soil/sediment
☐	☐	Explosives
☐	☐	Fly and bottom ash
☐	☐	Fuels/propellants
☐	☐	Medical/biological wastes
☒	☐	Metals
☐	☐	Mining wastes
☐	☐	Non-metal inorganic chemicals
☐	☐	Oily wastes
☒	☒	Organic chemicals
☐	☐	POTW sludge
☐	☐	Paints/pigments
☐	☐	Pesticides/herbicides
☐	☐	Radioactive wastes
☐	☐	Still and tank bottoms
☐	☐	Strong acids/bases
☐	☐	Other (specify) _____

4.5 **SPECIFIC WASTE CONSTITUENTS.** Which of the following waste constituents have been deposited or detected on-site? (Check all that apply, and make sure the response is consistent with the response to question 4.4.)

- ☐ Asbestos
- ☐ Creosote
- ☒ Cyanides
- ☐ Dioxins (e.g., TCDD)
- ☒ Lead
- ☒ Mercury
- ☐ Pentachlorophenol (PCP)
- ☐ Polychlorinated biphenyls (PCBs)
- ☒ Polycyclic aromatic hydrocarbons (PAHs)
- ☐ None of the above
- ☒ Other (specify) Benzene, toluene, ethylbenzene, xylenes

4.6 **WASTE ACCESSIBILITY.** Is the waste on-site currently accessible to the public (e.g., is site access unrestricted so people can potentially come into direct contact with contaminated materials)? Items to be considered when judging accessibility include, for example, presence or absence of a complete cover over the waste area and a secure fence around the site. A site with natural access restrictions (e.g., steep terrain) also can be considered inaccessible. Do not count on-site workers as part of the public when answering this question. (Check one.)

- ☐ Yes
- ☒ No
- ☐ Unknown

5. Demographics

For this section, do not directly use the population factor values calculated in the HRS and entered in HRS scoresheets. Use actual (i.e., unweighted, unadjusted) population figures, which should be available in the HRS supporting documentation.

5.1 **NUMBER OF WORKERS ON-SITE.** What is the current number of workers present on-site (not including workers involved in response activities)? For ground water plume and surface water sediment sites with no identified source, the response should be "Unknown." (Check one.)

- ☒ 0
- ☐ > 0 and 10
- ☐ > 10 and 100
- ☐ > 100 and 1,000
- ☐ > 1,000
- ☐ Unknown

5.2 **DISTANCE TO POPULATION.** What is the shortest distance from any source or area of contamination at the site to the nearest residential individual (include all persons occupying homes, apartments, businesses, or schools)? If contamination has migrated to the property of a nearby resident(s), then check the box next to "0 miles." If the source or contaminated area is not clearly identified, use distance from the site property boundary. (Check one.)

- ☐ 0 miles (i.e., on-site)
- ☒ > 0 and 1/4 mile
- ☐ > 1/4 and 1/2 mile
- ☐ > 1/2 and 1 mile

☐ > 1 and 4 miles
☐ > 4 miles

5.3 **POPULATION.** What is the total residential population within one mile and four miles of the site (include all persons occupying homes, apartments, businesses, or schools)? (Check one in each column.)

Within 1 mile	Within 4 miles	
☐	☐	0
☐	☐	> 0 and 10
☐	☐	> 10 and 100
☐	☐	> 100 and 1,000
☒	☐	> 1,000 and 10,000
☐	☒	> 10,000 and 100,000
☐	☐	> 100,000
☐	☐	Unknown

6. Water Use

For the purposes of this section, "local" refers to ground water withdrawals within four miles and surface water withdrawals within 15 "in-water" miles (e.g., downstream miles for streams and rivers) of the site (i.e., within HRS target distance limits).

6.1 **TOTAL DRINKING WATER POPULATION SERVED.** What is the total population served by local ground and surface water sources of drinking water? Use actual population numbers and not adjusted values taken directly from HRS scoresheets. For blended systems, use total population served instead of prorated values. Note that the total population served does not have to reside within the HRS target distance limits, only the drinking water supply withdrawal point(s) needs to be within the limits. (Check one in each column.)

Ground	Surface	
☐	☐	10
☐	☐	> 10 and 100
☐	☐	> 100 and 1,000
☐	☐	> 1,000 and 10,000
☒	☐	> 10,000 and 100,000
☐	☐	> 100,000
☐	☒	Not applicable (no drinking water withdrawals within HRS target distance limits)
☐	☐	Unknown

6.2 **TYPE OF DRINKING WATER SUPPLY SYSTEM.** What type(s) of local drinking water supply system(s) is present? "Public" should be checked for any central water supply system, even if operated by a private entity. (Check all that apply.)

Ground	Surface	
☐	☐	Private (e.g., individual wells)
☒	☐	Public (serves over 25 people; e.g., municipal systems)
☐	☒	Not applicable (no drinking water withdrawals within HRS target distance limits)
☐	☐	Unknown

6.3 **OTHER GROUND WATER USES.** What are the other uses of ground water withdrawn within four miles of the site? (Check all that apply.)

- ☐ Commercial uses (e.g., food preparation, aquiculture)
- ☐ Industrial process/cooling
- ☒ Irrigation
- ☐ Recreation (e.g., water supply for municipal swimming pool, infiltration into lakes used for recreation)
- ☐ Stock watering
- ☐ Other (specify) _____
- ☐ None
- ☐ Unknown

6.4 **DEPTH TO AQUIFER.** What is the approximate depth from the ground surface to the uppermost usable aquifer (i.e., an aquifer having sufficient yield and water quality to be usable as drinking water or for other beneficial uses) beneath the site? (Check one.)

- ☐ 10 feet
- ☐ > 10 and 25 feet
- ☐ > 25 and 50 feet
- ☐ > 50 and 100 feet
- ☒ > 100 feet
- ☐ Unknown

6.5 **OTHER SURFACE WATER USES.** What are the other uses of surface water withdrawn within 15 in-water miles of the site? (Check all that apply.)

- ☐ Commercial fishery, including aquiculture
- ☐ Industrial process/cooling
- ☐ Irrigation
- ☐ Not currently used, but designated by the state for potential drinking water use
- ☐ Other commercial uses
- ☐ Other recreation
- ☐ Recreational fishing
- ☐ Stock watering
- ☐ Other (specify) _____
- ☐ None
- ☒ Unknown

6.6 **TYPE OF SURFACE WATER ADJACENT TO/DRAINING SITE.** What are the type(s) of surface water adjacent to/draining the site that could potentially be affected by overland runoff from the site (i.e., are within two miles of any source)? Indicate whether the water body is known or suspected of being contaminated by the site. "Yes" would indicate that the surface water body meets the HRS criteria for observed release. "Suspected" would indicate that there is some evidence of contamination that is attributable to the site, but the surface water body does not meet the HRS criteria for observed release. (Check all that apply.)

	Contaminated?			
☐ Bay	☐ Yes	☐ Suspected	☐ No	☐ Unknown
☐ Canal	☐ Yes	☐ Suspected	☐ No	☐ Unknown
☐ Drainage ditch	☐ Yes	☐ Suspected	☐ No	☐ Unknown
☐ Intermittent stream	☐ Yes	☐ Suspected	☐ No	☐ Unknown
☐ Lake/reservoir	☐ Yes	☐ Suspected	☐ No	☐ Unknown
☐ Ocean	☐ Yes	☐ Suspected	☐ No	☐ Unknown

☐	Perennial stream	☐	Yes	☐	Suspected	☐	No	☐	Unknown
☐	Pond	☐	Yes	☐	Suspected	☐	No	☐	Unknown
☐	River (> 1,000 cfs annual average flow)	☐	Yes	☐	Suspected	☐	No	☐	Unknown
☐	Wetland	☐	Yes	☐	Suspected	☐	No	☐	Unknown
☐	Other (specify) _____	☐	Yes	☐	Suspected	☐	No	☒	Unknown
☐	No surface water within two miles								
☒	Unknown								

7. Sensitive Environment and Reported Environmental Damage Information

7.1 **EXISTENCE OF SENSITIVE OR POTENTIALLY VULNERABLE ENVIRONMENT.** Is the site in or near (i.e., within a four-mile radial distance, or for surface water within 15 "in-water" miles) an HRS-designated sensitive environment(s) or other potentially vulnerable environment(s)? (Check all that apply.)

- ☐ Yes, HRS-designated sensitive environment(s)
  - ☐ Critical habitat for Federal designated endangered or threatened species
    - ☐ Areas identified under the Coastal Zone Management Act
    - ☐ Critical areas identified under the Clean Lakes Program
    - ☐ Designated Federal wilderness area
    - ☐ Marine sanctuary
    - ☐ National lakeshore recreational area
    - ☐ National monument
    - ☐ National park
    - ☐ National seashore recreational area
    - ☐ Sensitive areas identified under National Estuary Program or Near Coastal Water Program
  - ☐ Habitat known to be used by Federal designated or proposed endangered or threatened species
    - ☐ Administratively proposed Federal wilderness area
    - ☐ Coastal barrier (undeveloped)
    - ☐ Federal land designated for protection of natural ecosystems
    - ☐ Migratory pathways and feeding areas critical for maintenance of anadromous fish species within river reaches or areas in lakes or coastal tidal waters in which the fish spend extended periods of time
    - ☐ National or State wildlife refuge
    - ☐ National preserve
    - ☐ National river reach designated as recreational
    - ☐ Spawning areas critical for the maintenance of fish/shellfish species within river, lake, or coastal tidal waters
    - ☐ Terrestrial areas utilized for breeding by large or dense aggregations of animals
    - ☐ Unit of coastal barrier resources system
  - ☐ Habitat known to be used by State designated endangered or threatened species
    - ☐ Coastal barrier (partially developed)
    - ☐ Federal designated scenic or wild river
    - ☐ Habitat known to be used by species under review as to its Federal endangered or threatened status
  - ☐ State designated areas for protection or maintenance of aquatic life

- ☐ State land designated for wildlife or game management
  - ☐ Particular areas, relatively small in size, important to maintenance of unique biotic communities
  - ☐ State designated natural areas
  - ☐ State designated scenic or wild river
- ☐ Wetland
- ☐ Other (specify) _____

☐ Yes, other potentially vulnerable environment(s) (see Appendix C for definitions)
- ☐ 100-year floodplain
- ☐ Karst terrain
- ☐ Seismic impact area
- ☐ Unstable terrain
- ☐ Vulnerable ground water (class I, as defined by EPA)
- ☐ Wellhead protection area
- ☐ Other (specify) _____

☒ No

☐ Unknown

7.2 **HUMAN HEALTH/BIOLOGICAL IMPACTS.** Have actual human health or biological impacts attributable to the site been shown to exist, been reported, or been observed? (Check all that apply.)

☐ Yes
- ☐ Fauna (e.g., fish kills, wildlife impacts)
- ☐ Flora (e.g., stressed vegetation)
- ☐ Human health
  - ☐ Air pathway
  - ☐ Ground water pathway
  - ☐ Soil exposure
    - ☐ Resident population threat
    - ☐ Nearby population threat
  - ☐ Surface water pathway
    - ☐ Drinking water threat
    - ☐ Human food chain threat
    - ☐ Environmental threat

☒ No

☐ Unknown

8. Response Actions

8.1 **TYPE OF RESPONSE ACTION.** What type(s) of response actions has already occurred at or near the site? (Check all that apply.)

- ☐ Action has been taken to reduce an immediate threat of fire or explosion
- ☐ Alternate water supply(ies) has been provided (on or off site)
- ☐ Drinking water well(s) has been closed (on or off site)
- ☐ Residents have been relocated
- ☐ Site access has been restricted in response to the contamination
- ☐ Waste has been physically removed from the site
- ☐ Waste has been treated/stabilized/contained on-site
- ☐ Other (specify) _____

☐ Unknown
☒ None

8.2 **AUTHORITY RESPONSIBLE FOR RESPONSE ACTION.** Who performed (or contracted for) the response action(s)? (Check all that apply.)

☐ EPA under authority of CERCLA
☐ EPA under other authority (specify) _____
☐ Private party (specify) _____
☐ State/local authority (specify) _____
☐ Other Federal agency (specify) _____
☐ Other (specify) _____
☒ Not applicable (check only if checked None in question 8.1)

STOP HERE. Section 9 will be completed by a Headquarters QA reviewer.

REVIEW OF COMPLETED FORM. When you have completed Sections 1 through 8 of the NPL Characteristics Data Collection Form, please check to ***make sure*** that:

(1) All questions are answered; and

(2) All questions have been answered such that the responses are internally consistent, especially those in Sections 2 and 3. For example, if the site is the result of a spill or other one-time event, the responses for questions 2.7, 2.8, 3.1, 3.2, and 3.3 should be consistent, while if the site is inactive or abandoned, the responses for questions 2.7, 2.9, 2.10, and 3.2 should be consistent.

9. Questions to be Completed by Headquarters QA Reviewer

9.1 **NAME OF QA REVIEWER:** _____

AFFILIATION (agency/company): _____

PHONE NUMBER: _____

9.2 **DATE QA COMPLETED FOR THIS FORM** (mm/dd/yyyy): _____

9.3 **NPL PROPOSED RULE NUMBER** (i.e., NPL AUpdate@ number): _____

9.4 **COMMENTS:** _____

_____

_____

_____

_____

Appendix A
Site Boundary Polygon Data

1. **Site Boundary Coordinates.** Use this space to provide site boundary polygon coordinates (if known). Coordinates of the entire site should be provided in the form of polygons, starting with the northern-most coordinate and moving clockwise (in degrees, minutes, seconds, and tenths of seconds). If you need additional space to record site boundary coordinates, please copy this page and provide the data on those additional pages. If submitting electronic coordinates, follow requirements in the Partial Deletion Guidance.

1.	°	'	"	North Latitude	°	'	"	West Longitude
2.	°	'	"	North Latitude	°	'	"	West Longitude
3.	°	'	"	North Latitude	°	'	"	West Longitude
4.	°	'	"	North Latitude	°	'	"	West Longitude
5.	°	'	"	North Latitude	°	'	"	West Longitude
6.	°	'	"	North Latitude	°	'	"	West Longitude
7.	°	'	"	North Latitude	°	'	"	West Longitude
8.	°	'	"	North Latitude	°	'	"	West Longitude
9.	°	'	"	North Latitude	°	'	"	West Longitude
10.	°	'	"	North Latitude	°	'	"	West Longitude
11.	°	'	"	North Latitude	°	'	"	West Longitude
12.	°	'	"	North Latitude	°	'	"	West Longitude
13.	°	'	"	North Latitude	°	'	"	West Longitude
14.	°	'	"	North Latitude	°	'	"	West Longitude
15.	°	'	"	North Latitude	°	'	"	West Longitude

If tenths of seconds are unknown, use "0" as a default value. If necessary, refer to Appendix E of EPA's 1991 PA guidance document for directions on how to determine coordinates.

2. **Description of Site Reference Area for Coordinates:**

Appendix A
Site Boundary Polygon Data (cont.)

3. **Method of Collection.** Describe the method used in collecting the data.

- ☐ Address matching
  - ☐ Block face
  - ☐ Digitized
  - ☐ House number
  - ☐ Nearest intersection
  - ☐ Primary name
  - ☐ Street centerline
  - ☐ Other (specify)
- ☐ Census
  - ☐ Block - 1990
  - ☐ Block/group - 1990
  - ☐ Block tract - 1990
  - ☐ Other (specify)
- ☐ Classical surveying techniques
- ☐ GPS
  - ☐ Carrier phase kinematic relative positioning technique
  - ☐ Carrier phase static relative positioning technique
  - ☐ Code measurements (pseudo range) differential (DGPS)
  - ☐ Code measurements (pseudo range) precise positioning service
  - ☐ Code measurements (pseudo range) standard positioning service SA off
  - ☐ Code measurements (pseudo range) standard positioning service SA on
- ☐ Interpolation
  - ☐ Map
  - ☐ Photo
  - ☐ Satellite
  - ☐ Other (specify)
- ☐ Loran C
- ☐ Public land survey
  - ☐ Quartering
  - ☐ Footing
- ☐ Zip code
- ☐ Other (specify)
- ☐ Unknown

4. **Accuracy Value and Unit.** Describe the accuracy value as a range (+/-) of the coordinates in meters.

Accuracy: +/- _____ Meters

Appendix A
Site Boundary Polygon Data (cont.)

5. **Vertical Measure.** Provide the vertical component of measured coordinates. If no vertical component, leave blank.

6. **Horizontal Datum.** Describe the reference datum of the coordinates.
   - ☐ NAD27
   - ☐ NAD83
   - ☐ Other (specify)
   - ☐ Unknown

7. **Source Scale.** Describe the scale of the source used to determine the coordinates.
   - ☐ 1:10,000
   - ☐ 1:12,000
   - ☐ 1:15,840
   - ☐ 1:20,000
   - ☐ 1:24,000
   - ☐ 1:25,000
   - ☐ 1:50,000
   - ☐ 1:62,500
   - ☐ 1:63,360
   - ☐ 1:100,000
   - ☐ 1:125,000
   - ☐ 1:250,000
   - ☐ 1:500,000
   - ☐ Other (specify)
   - ☐ Unknown

Appendix B
Definitions of Primary Site Activity Types
(To be Used in Responding to Question 3.1)

Manufacturing/processing/maintenance: Activities resulting from the production of products from raw materials, the processing of materials, or the maintenance of a product.

Chemicals and allied products: Activities involving manufacturing, creating, or packaging of chemicals such as chloride, pharmaceutical chemicals, organic compounds, acids, pesticides, fertilizers, herbicides, insecticides, adhesives, glues, paints, or dyes, with the exclusion of primary metals. This includes chemicals that are manufactured to be used later for other purposes, such as creosote and coal tar.

Coal gasification: Activities related to the process of making natural gas from coal. Coal mining operations are not included in this subcategory.

Coke production: Activities involving the production of coke from coal.

Electronic/electrical equipment: Activities involving manufacturing or maintenance of electronic devices and electronic equipment such as computer components.

Electric power generation and distribution: Activities involving generation, distribution, or maintenance of electric power, including electric power plants, transmitter stations, or transformer stations.

Fabric/textiles: Activities associated with the processing and treating of fabrics or textiles.

Lumber and wood products/pulp and paper: Activities involving production of lumber, wood products, pulp, or paper. This does not include wood treating or preserving.

Lumber and wood products/wood preserving/treatment: Activities involving preserving and treating wood products. Common contaminants found at wood preserving sites include creosote, copper-chromate-arsenic (CCA), or pentachlorophenol (PCP).

Metal fabrication/finishing/coating and allied industries: Activities involving fabrication, finishing, coating, or plating of metals.

Oil and gas refining: Activities involving petroleum, oil, and gas refining and reformation.

Ordnance production: Activities related to manufacturing or maintenance of ammunition, artillery, explosives, or torpedoes.

Plastics and rubber products: Activities involving manufacturing of rubber products such as tires or plastics for a variety of uses.

Primary metals/mineral processing: Activities involving manufacturing and processing of raw materials exclusively through smelting of metals or processing of ores. This does not include mining operations but includes all mineral processing operations subsequent to mining. Recycling batteries and scrap metals, secondary smelting, and precious metal recovery are not included in this subcategory.

Radioactive products: Activities involving manufacturing, processing, refining, or milling of radioactive products such as radium, uranium, and vanadium.

Tanneries: Activities associated with the processing and treating of leather products.

Trucks/ships/trains/aircraft and related components: Activities related to manufacturing or maintenance of vehicles including trucks, ships, aircraft, and related components such as engines or drive train components.

Other: Activities that involve manufacturing, processing, or maintenance, but do not clearly fit into any of the above sub-categories.

Unknown: Activities that involve manufacturing, processing, or maintenance, but the specific activities are unknown.

Appendix B
Definitions of Primary Site Activity Types (cont.)

Mining: Operations involving surface and subsurface excavation for the purpose of extracting mineral substances. Do not use this category to describe former mining sites that have been used to deposit or store waste.

Coal: Operations involving coal excavation.

Metals: Operations involving mining of metals such as gold, silver, iron, or copper.

Non-metal minerals: Operations involving mining of non-metals such as sulfur or phosphorous.

Oil and gas: Operations involving extracting oil and natural gas from the ground.

Other: Activities that involve mining, but do not clearly fit into any of the above sub-categories, such as sand and gravel excavation.

Unknown: Activities that involve mining, but the specific activities are unknown.

Recycling: Activities involving the reprocessing of some product to regain material.

Automobiles/tires: Activities involving recovering products from automobiles such as tires and metals.

Batteries/scrap metals/secondary lead smelting/precious metal recovery: Activities related to reprocessing of batteries or scrap metals to gain another product. This subcategory includes precious metal recovery and secondary lead smelting.

Chemicals/chemical waste (e.g., solvent recovery): Activities which involve the recovery of chemicals such as solvents.

Drums/tanks: Activities involving processing of used drums or tanks.

Waste/used oil: Activities related to reprocessing waste oil to gain another product.

Other: Activities that involve recycling, but do not clearly fit into any of the above sub-categories.

Unknown: Activities that involve recycling, but the specific activities are unknown.

Waste management: Activities related to the treatment, storage, or disposal of waste.

Co-disposal landfill (municipal and industrial): A landfill which meets the definition of both an industrial and municipal landfill.

Illegal disposal/open dump: A disposal area where hazardous waste was dumped without authorization of the site owner or an open dump area.

Industrial waste landfill: An area used solely as a landfill where hazardous waste from a commercial or industrial source is disposed, regardless of whether the landfill is permitted by some government entity.

Industrial waste facility (non-generator): A facility which disposes, treats, or stores industrial waste. Examples of waste management operations that fit under this sub-category would be facilities that contain surface impoundments, incinerators, injection wells, open burn areas, or containers/drums/tanks.

Mine tailings disposal: An area where mine tailings, subsequent to mining, are disposed.

Municipal solid waste landfill: An area used solely as a landfill where domestic, demolition, construction, or sanitary waste is disposed, regardless of whether the landfill is permitted by some government entity.

Radioactive waste treatment, storage, disposal (non-generator): A facility which disposes, treats, or stores radioactive waste, but does not generate waste.

Other: Activities that involve waste management, but do not clearly fit into any of the above sub-categories.

Unknown: Activities that involve waste management, but the specific activities are unknown.

Appendix B
Definitions of Primary Site Activity Types (cont.)

Other: This category should only be used when a site activity does not fit into any of the other main categories.

Agricultural (e.g., grain elevator): A site at which agricultural activities such as farming or pesticide application occurred.

Contaminated sediment site: Contaminated surface water sediments with no identified source. For sites where the source of contamination is known, select the appropriate category/sub-category.

Ground water plume site: Contaminated ground water plume with no identified source. For plume sites where the source of contamination is known, select the appropriate category/sub-category.

Military: Activities at a military installation which could not specifically be assigned to any other category/subcategory (e.g., military base used for training, recruiting, or as a command center).

Product storage/distribution: Activities involving storage and/or distribution of items such as goods, products, or substances.

Research, development, and testing facility: A site that is used solely for research, development, and/or testing with no other site activities occurring.

Residential: A site used for residential purposes (including hotels). This sub-category can be used for Secondary Site Activity Type only.

Retail/commercial: A site which can be classified as being used for retail or commercial purposes such as a shopping center or dry cleaners.

Spill or other one-time event: A site that is the result of a one-time spill (e.g., truck, rail car, or barge accident) or other one-time event (e.g., one-time illegal dumping), with no other ongoing waste management or waste generation activities on-site.

Spraying or spreading substances for dust control: Activities involving spraying or spreading substances on the ground for purposes of dust control.

Transportation (e.g., railroad yards, airport, barge docking site): Activities related to airports, railroad yards, barge docking sites, transfer stations, or cleaning or fueling facilities. This sub-category does not include manufacturing or maintenance activities.

Treatment works/septic tanks/other sewage treatment: Activities related to wastewater and sewage treatment operations, including publicly owned treatment works.

Other: Activities which do not fit into any of the above sub-categories.

Unknown: Site activities are unknown based on available site documentation.

Appendix C
Definitions of Potentially Vulnerable Environments
(To be Used in Responding to Question 7.1)

100-year Floodplain: Any area that is subject to a one percent or greater chance of flooding in any given year from any source. For riverine systems, both the floodway and the floodway fringe are included in the 100-year floodplain.

Karst Terrain: Area where karst topography, with its characteristic surface and subterranean features, is developed as a result of dissolution of limestone, dolomite or other soluble rock. Characteristic physiographic features present in karst terrain include, but are not limited to, sinkholes, sinking streams, caves, large springs, and blind alleys.

Seismic Impact Area: Area where the probability is greater than or equal to 10 percent that the maximum horizontal acceleration in firm ground or rock at a particular site will equal or exceed 0.10 g (expressed as a percentage of the earth=s gravitational pull (g)), within a time period of 250 years. Horizontal ground acceleration is defined as maximum change in velocity over time relative to horizontal movement of the earth=s surface as measured at a particular point during an earthquake. This parameter is used to calculate the acceleration values for any particular area and is derived from equations relating to the area=s geology and its past seismicity.

Unstable Terrain: Area capable of impairing the integrity of an engineered structure as a result of natural events or human activities. Relevant natural events include, but are not limited to, localized ground subsidence; differential settling, collapse and slope failure; sinkhole formation in karst terrains; liquefaction; and hydrocompaction. Relevant human activities include, but are not limited to, construction operations; flood controls; ground water pumping, injection, and withdrawal; resource extraction; storm water drainage; and seepage from human-made water reservoirs.

Vulnerable Ground Water (Class I Ground Water): Ground water that is highly vulnerable to contamination and are either (1) irreplaceable as a source of drinking water to a substantial population or (2) ecologically vital.

Wellhead Protection Area: Area designated by the states to protect wells in recharge areas of public drinking water supplies, under authority of Section 1428 of the Safe Drinking Water Act.

Appendix D
Additional Comments

Use this space to further clarify or explain responses to questions in the NPL Data Collection Form. When clarifying or explaining a response, please *make sure to provide the question number*. Attach additional sheets if necessary.

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SUPERFUND MEMORANDUM OF AGREEMENT

BETWEEN THE

FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION

AND THE

U.S. ENVIRONMENTAL PROTECTION AGENCY, REGION 4

Recommendation

For the reasons discussed in this memo, we recommend Headquarters concurrence on the attached MOA between EPA Region 4 and FDEP. It is important to recognize, however, that this MOA reflects State issues specific to Florida and Region 4, and it involves Region 4 resources significantly beyond the VCP MOA concept. As in all VCP MOAs, this is a state-specific MOA that should not be construed as any type of model or national policy.

For questions regarding this Memo, please contact program staff, Karin Koslow, in the Office of Site Remediation Enforcement, at 202-564-0171 or Nancy Wilson, Outreach and Special Projects Staff, at 202-260-1910.

☑ Concur
☐ Non-concur
☐ Concur with comment (attached)

Steven A. Herman, Assistant Administrator
Office of Enforcement and Compliance Assurance

11/19/99
Date

☒ Concur
☐ Non-concur
☐ Concur with comment (attached)

Timothy Fields, Jr., Assistant Administrator
Office of Solid Waste and Emergency Response

11/12/99
Date

SUPERFUND MEMORANDUM OF AGREEMENT
BETWEEN THE
FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION
AND THE
U.S. ENVIRONMENTAL PROTECTION AGENCY, REGION 4

I. PURPOSE OF AGREEMENT

The purpose of this Superfund Memorandum of Agreement ("SMOA") is to coordinate the roles and responsibilities of the U.S. Environmental Protection Agency ("EPA"), Region 4 and the Florida Department of Environmental Protection ("FDEP") with respect to cleanup of hazardous substances conducted under the authority of the Comprehensive Environmental Response, Compensation and Liability Act of 1980, as amended ("CERCLA") and Florida's Brownfields Redevelopment Act as established in Sections 376.77 - 85, Florida Statutes (F.S.), (the "Florida Brownfields Redevelopment Act"). This SMOA defines those roles and responsibilities with respect to the sites set forth on the List of Covered Sites, ("Exhibit A") attached hereto.

II. BACKGROUND TO AGREEMENT

EPA Region 4 and FDEP believe that the revitalization of abandoned, idled, or under-used industrial or commercial facilities where expansion or redevelopment is complicated by real or perceived contamination (commonly known as "Brownfields") will provide a significant benefit both to the environment and to local communities. As part of its Brownfields Action Agenda, EPA has committed to working with states to define appropriate federal and state roles with respect to site assessments and cleanups at Brownfield sites. EPA Region 4's and Florida's overall goals are to encourage the reuse of Brownfields, and to protect public health and the environment of communities in which such properties are located by expediting assessment and cleanup of the properties, and to provide the opportunity for economic benefit to those communities.

By entering into this agreement, EPA Region 4 and FDEP seek to expedite the assessment and cleanup of contaminated property in Florida, and to facilitate the return of such property to productive use. EPA Region 4 believes that state programs, such as the program set forth in the Florida Brownfields Redevelopment Act, will reduce the need for federal involvement at many contaminated sites. Both agencies recognize that to meet this goal EPA Region 4 and FDEP should:

- exercise their authorities and use their resources as efficiently as possible;

- promote appropriate investigations and cleanups by parties voluntarily participating in Brownfield site cleanups pursuant to Section 376.82, F.S., of the Florida Brownfields Redevelopment Act, the Florida Brownfields Cleanup Criteria {"Chapter 62-785, Florida Administrative Code", (F.A.C.)}, and a brownfield site rehabilitation agreement ("BSRA"); and

- develop partnerships among EPA Region 4, the State of Florida ("State"), other state and local governmental agencies, and key external stakeholders in the State, including representatives from citizen and community groups and the private sector.

III. SCOPE OF AGREEMENT

The scope of this agreement extends to those sites, regardless of their status in the Comprehensive Environmental Response, Compensation and Liability Information

(CERCLIS), where redevelopment and rehabilitation efforts may be hindered, in part, by CERCLA liability issues. A site is eligible to be covered by this agreement if the site meets all of the following criteria:

A. The site has been designated as a Florida Brownfield Area and a BSRA has been executed for the site; and

B. The site is listed in CERCLIS and is not a high priority for further CERCLA action following an EPA-approved Preliminary Assessment or Site Investigation (Exhibit B and Appendix B). If no priority has been assigned, EPA Region 4 will evaluate the site and assign a priority level prior to determining whether the site is eligible for coverage; **or**
The site is not an appropriate candidate for the CERCLIS Inventory pursuant to FDEP's CERCLA prescreening / site discovery checklist (Appendix C); **or**
The site is a non-CERCLIS site which EPA Region 4 and FDEP have determined could be addressed more effectively through the Florida Brownfields Redevelopment Act than the CERCLA process as long as the site meets the criteria set forth in paragraphs A, C, D, E, and F herein; and

C. The site has not had a Hazard Ranking System (HRS) package submitted to EPA Headquarters or the site has not been proposed for, or listed on, the National Priorities List; and

D. The site is not a site at which EPA Region 4 is planning to initiate or has initiated a response action or at which a private party is required to conduct cleanup pursuant to a Unilateral Administrative Order issued pursuant to Section 106 of CERCLA or pursuant to a consent decree or consent agreement under Section 122 of CERCLA or where EPA Region 4 is planning to initiate or has initiated corrective action pursuant to Sections 3013, 7003 or 3008(a) of the Resource Conservation and Recovery Act (RCRA); and

E. The site is not a federal facility governed by Section 120 of CERCLA; and

F. The site is not a site that contains a facility which is a permitted facility or an interim status facility as defined by Section 3005 of RCRA and/or is not a facility undergoing, or potentially subject to, corrective action pursuant to Sections 3004(u), 3004 (v) or 3008 (h) of RCRA.

Only sites meeting all of the above criteria are eligible to be considered for coverage. Of those sites that are eligible, only those that have been mutually agreed upon by FDEP and EPA Region 4 as shown on Exhibit A shall be subject this SMOA.

IV. PRINCIPLES OF AGREEMENT

A. EPA Region 4 has determined that the Florida Brownfields Redevelopment Act provides meaningful community involvement in rehabilitation and redevelopment of brownfields sites. The Florida Brownfields Redevelopment Act requires public notification and participation in the rehabilitation process as follows:

1. A local advisory committee must be established in accordance with Section 376.80(4), F.S., of the Brownfields Redevelopment Act. When such a committee is established, the local governments or persons responsible for rehabilitation and redevelopment of brownfield areas must establish such advisory committee for the purpose of improving

public participation and receiving public comments on rehabilitation and redevelopment of a brownfield area, future land use, local employment opportunities, community safety, and environmental justice. The advisory committee must review and provide recommendations on the proposed BSRA; and

2. When establishing a temporary point of compliance for groundwater beyond the property boundary with appropriate monitoring, if such extension is needed to facilitate natural attenuation or to address the current conditions of the plume provided human health, public safety, and the environment are protected, public notification and participation shall be required as follows. Temporary extension of the point of compliance beyond the property boundary, provided in Section 376.81(1)(b), F.S., of the Brownfields Redevelopment Act must include actual notice by the person responsible for brownfield site rehabilitation ("PRFBSR") to local governments and the owners of the property into which the point of compliance is allowed to extend and constructive notice to residents and business tenants of the property into which the point of compliance is allowed to extend. Persons receiving notice shall have an opportunity to comment within 30 days of receipt of the notice. The notice shall be published in accordance with the requirements of Rule 62-785.690, F.A.C., of the Brownfields Cleanup Criteria Rule.

   When a local government proposes to designate a brownfield area that is outside a community redevelopment area, enterprise zones, empowerment zones, closed military bases, or an EPA designated brownfield pilot project area, the local government must conduct at least one public hearing in the area to be designated to provide an opportunity for public input on the size of the area, the objectives for rehabilitation, job opportunities and economic developments anticipated, neighborhood residents' considerations, and other revelant public concerns. Notice of the public hearing must be in accordance with Section 376.80(2)(a), F.S., of the Brownfields Redevelopment Act;

B. EPA Region 4 has determined that response actions taken by FDEP will be protective of human health and the environment. The rehabilitation objective will be based on the FDEP's Chapter 62-785, F.A.C., the Brownfields Cleanup Criteria Rule.

C. EPA Region 4 has determined that FDEP has adequate resources to ensure that the voluntary response actions performed to cleanup/rehabilitate the sites listed on Exhibit A are performed in an appropriate and timely manner and that technical assistance and streamlined procedures are available, where appropriate, from FDEP.

D. EPA Region 4 has determined that Chapter 62-785, F.A.C., provides a mechanism for written approval of PRFBSRs' Remedial Action Plans and other related rehabilitation documents, and provides a mechanism for written certification to PRFBSRs engaged in voluntary cleanup activities pursuant to the Brownfields Redevelopment Act that response actions have been satisfactorily completed (No Further Action Letters). The FDEP agrees to provide copies of a schedule for the cleanup/rehabilitation and copies of all No Further Action Letters with respect to the sites listed on Exhibit A to EPA Region 4 in a timely manner.

E. EPA Region 4 has determined that FDEP will provide adequate oversight of voluntary parties conducting cleanups at sites listed on Exhibit A to ensure that the response actions are conducted in accordance with Chapter 62-785, F.A.C., are conducted in a timely manner, and are protective of human health and the environment.

F. Based on a review of relevant Florida statutes, EPA Region 4 has determined that FDEP is capable by enforcement actions against the responsible parties, or by state-funded cleanups, of ensuring completion of cleanup if the PRFBSR fails or refuses to do so.

G. The FDEP will, in the event the PRFBSR fails to comply with the BSRA, allow 90 days for the PRFBSR to return to compliance with the provision at issue or to negotiate a modification to the BSRA with the FDEP for good cause shown. If an imminent hazard exists, the 90-day grace period shall not apply. If the project is not returned to compliance with the BSRA and a modification cannot be negotiated within the 90-day grace period, the immunity provisions of the Brownfields Redevelopment Act are revoked and the site will be removed from Exhibit A.

H. Under F.S. 376.80 (11), FDEP is authorized to enter into delegation agreements with local pollution control programs to administer the state brownfields program within these local jurisdictions. Notwithstanding any such delegation agreement to local pollution control programs, the terms of this agreement shall remain the obligations of FDEP as to any sites on Exhibit A.

V. EPA REGION 4's COMMITMENTS

A. Although this SMOA does not constitute a release from liability under CERCLA, generally EPA Region 4 does not anticipate taking removal or remedial action pursuant to CERCLA at any sites listed on Exhibit A unless EPA Region 4, after consultation with the FDEP, determines that:

1. The PRFBSR has undertaken actions at the site that have exacerbated the existing contamination problem or has undertaken actions at the site that have caused a new contamination problem and has failed to abate the exacerbated problem in accordance with the terms of the BSRA; or

2. The site may present an imminent and substantial endangerment to human health or welfare or the environment and federal action is warranted; or

3. The PRFBSR fails or refuses to complete the necessary cleanup in a competent or timely manner in accordance with its BSRA, and FDEP is unable to or refuses to ensure completion of response actions.

B. Upon agreement of listing a site by FDEP and EPA Region 4 on Exhibit A, EPA Region 4 will indicate on CERCLIS that the site is the subject of voluntary remediation pursuant to Chapter 62-785, F.A.C., and EPA Region 4 currently plans no removal or remedial action, except under the limited circumstances set forth in Paragraph A. above.

C. Following FDEP's determination of compliance with the BSRA by issuance of a Site Rehabilitation Completion Order and upon the request of FDEP, EPA Region 4 will issue Comfort Letters to property owners or to PRFBSRs of such sites in accordance with EPA's Policy on the Issuance of Comfort/Status Letters (November 8, 1996). In addition, EPA Region 4 will update, as necessary, the CERCLIS Inventory by archiving the site to reflect compliance with the BSRA and, if requested, provide formal notification of this action to the property owner or to the PRFBSR in accordance with EPA's Policy on the Issuance of Comfort/Status Letters.

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PRELIMINARY CONTAMINATION ASSESSMENT PLAN
PARK VIEW INN
901 NORTH MAIN STREET
JACKSONVILLE, FLORIDA

Prepared By:

Aerostar Environmental Services, Inc.
11200-1 St. Johns Industrial Parkway
Jacksonville, Florida 32246
(904) 565-2820

Prepared For:

Mr. David J. Muyres
Park Group Investors
P.O. Box 1644
Orange Park, Florida 32067-1644

Submitted To:

Florida Department of Environmental Protection
Northeast Division
7825 Baymeadows Way, Suite B200
Jacksonville, Florida 32256-7577

March 8, 1999

CERTIFICATION

PROFESSIONAL GEOLOGIST LICENSED IN THE STATE OF FLORIDA

This is to certify that this ***Preliminary Contamination Assessment Plan, Park View Inn, 901 North Main Street, Jacksonville, Florida,*** satisfies the guidelines set forth by the Florida Department of Environmental Protection, and provides reasonable assurances of achieving the objectives stated in the guidelines.

Date:
Signature:

K. Dawn Blackledge, P.G.
Florida License No. 556
Aerostar Environmental Services, Inc.
11200-1 St. Johns Industrial Pkwy.
Jacksonville, Florida 32246
(904) 565-2820

TABLE OF CONTENTS

FIGURES

APPENDICES

Rule 17-3 Florida Administrative Code, FAC classification, and provide the number and locations of all public and private potable supply wells within a one mile radius of the site.

3.2 Site Specific Geology and Hydrogeology

Site specific geological information will be obtained during the installation of six proposed permanent monitor wells. Additional geology and hydrogeology will be obtained from previous PCAR activities conducted southwest of the site at the former Exxon service station and from EHT activities conducted north of the site. The direction of groundwater flow in the site area was determined during the former Exxon service station PCAR to be generally to the northeast. This information will be updated in the PCAR to include the groundwater level data from the proposed monitor wells. The elevation of the top of the proposed monitor wells will be determined to 0.01 foot by a field topographic survey based on a common relative datum. Water levels will then be measured to an accuracy of 0.01 foot in all wells and a groundwater flow map will be prepared to estimate the direction of groundwater flow.

3.3 Soil and Groundwater Quality

3.3.1 Monitor Well Location and Justification

Six permanent monitor wells will be installed to evaluate groundwater quality at the site. Due to the significant site restoration activities that have occurred since the operation of the coal gasification plant, the wells will be spaced out as evenly as possible based on structural restraints at the site. All these wells will be completed in the upper zone of the surficial aquifer. Figure 2 shows the approximate location of each of the proposed wells.

3.3.2 Monitor Well Design and Installation

The six monitor wells will be completed to a depth of approximately 20 feet below land surface (BLS) and will penetrate the upper surficial aquifer. The wells will be constructed with 15 feet of one-inch diameter, Schedule-40 PVC 10 slot well screen and five feet of one-inch diameter, Schedule-40 PVC well casing. A one foot bentonite seal will be inserted above the sand and the remainder of the annular space will be backfilled with cement grout. A typical well construction diagram is included as Figure 3.

The monitor wells will be installed using a Skid Steer Geoprobe. The wells will be installed by using direct push technology to the total depth of the wells. All equipment used for well construction will be decontaminated prior to drilling and installing each well. The wells will be developed by pumping or bailing at least five volumes of water from each well to remove fine sediments from the well.

3.3.3 Groundwater Sampling and Analyses

The newly installed monitor wells will be sampled in accordance with AEROSTAR's FDEP approved Comprehensive Quality Assurance Plan (ComQAP) #9400236. All groundwater samples will be collected with disposable bailers after purging each well by bailing a

minimum of five well volumes and measuring the field parameters (pH, specific conductance, and temperature). When the field parameters are stable within 5 percent of the previous reading for each parameter, the purging process will be terminated. Samples will then be collected and placed into laboratory prepared containers and placed into an insulated container on ice for shipment to a FDEP Certified Laboratory. The groundwater samples will be analyzed for the parameters listed in EPA Methods 624, 625 (+ phenols), and 8 RCRA metals.

3.3.4 Soil Sampling and Analysis

As shown in Figure 2, borings will be installed in the six monitor well locations. The soil borings will be installed using a hand auger with a three inch diameter grab sampling bucket. Discrete soil samples will be obtained at one foot intervals from land surface to the water table, estimated to be ten feet BLS. All samples will be collected in accordance with AEROSTAR's FDEP approved ComQAP # 9400236, and will be screened in the field using an Organic Vapor Analyzer (OVA) in accordance with AEROSTAR's ComQAP. The samples will also be visually inspected for signs of contamination, such as staining and unusual odors. Based on the results of field soil screening, one sample may be collected and submitted to a FDEP certified laboratory for analysis of the parameters listed in EPA Methods 8260, 8270 + phenols, and 8 RCRA metals.

3.4 Receptor Survey

Permanent surface water bodies within one-half mile of the site will be identified by an examination of 7-1/2 minute U.S. Geological Survey Jacksonville, Florida Quadrangle Maps. Surface water bodies identified by the examination of topographic maps will be verified during a field reconnaissance. A well inventory will be conducted to determine the number and locations of all visible, public and private potable water supply wells within a one-half mile radius of the site.

4.0 PRELIMINARY CONTAMINATION ASSESSMENT REPORT

Upon completion of the investigations described in this PCAP, a PCAR will be prepared which summarizes the findings of the assessment activities. The report will address all items listed in this PCAP and will include, but not be limited to, the following information:

1. Site description and background information;
2. Regional geology;
3. Site hydrogeology including geologic logs and cross-sections;
4. Soil boring locations and method of sampling and analyses of soil samples;
5. Monitor well locations, description of methods used to install wells, and method of sampling and analyses of groundwater samples;

6. Tables showing the results of soil and groundwater analyses;

7. Groundwater flow maps and tables showing water level measurements;

8. Results of receptor survey;

9. Summary and conclusions describing contamination present;

10. Quality assurance data for groundwater sampling analyses; and

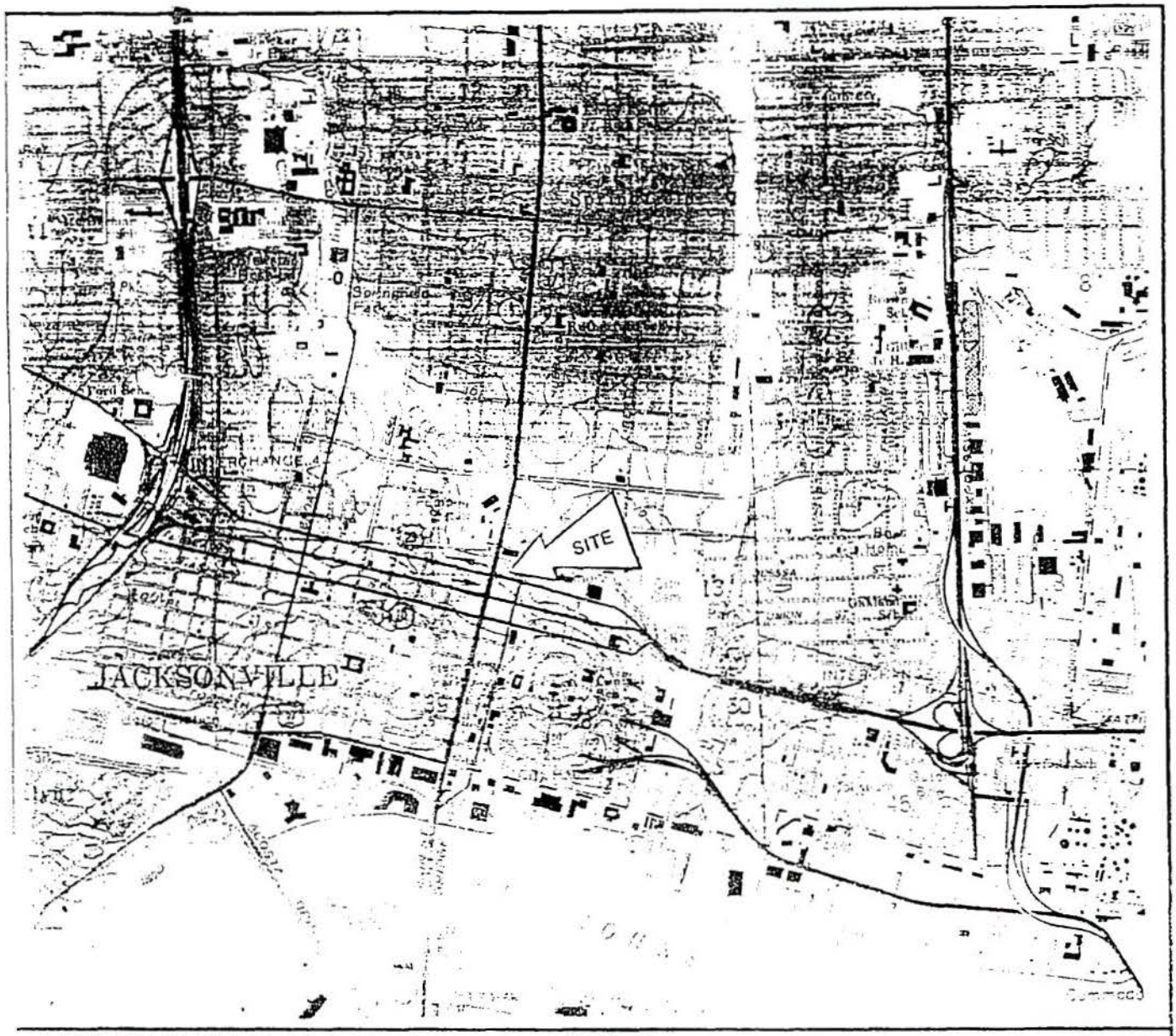
11. Appendices showing the previous studies, laboratory analyses of soil and groundwater samples, and field data.

5.0 PROJECT WORK SCHEDULE

Field work will be initiated for the PCA within two weeks of FDEP approval of the PCAP. The work described herein will be completed as follows:

Week one	Monitor Well Installation, Soil Boring Installation, Groundwater Sampling
Week two	Laboratory Analyses
Week three	Data Compilation; Data Interpretation
Week four	Report Compilation
Week five	Submittal to FDEP

FIGURES



JACKSONVILLE, FLORIDA QUADRANGLE

30081-C6-TF-024

1964

7.5 MINUTE SERIES

(TOPOGRAPHIC)

PHOTOREVISED 1992

DMA 4644 I SW-SERIES V847

CONTOUR INTERVAL 5 FEET

NATIONAL GEODETIC VERTICAL DATUM OF 1929

FLORIDA

QUADRANGLE LOCATION

N

SCALE: 1:24000

FIGURE 1 TOPOGRAPHIC SITE LOCATION MAP

Aerostar

PARKVIEW INN
901 NORTH MAIN STREET
JACKSONVILLE, FLORIDA

DRAWN BY: VLB

REFERENCE: MAP OF JACKSONVILLE, FLORIDA. PREPARED BY: U.S. GEOLOGICAL SURVEY.

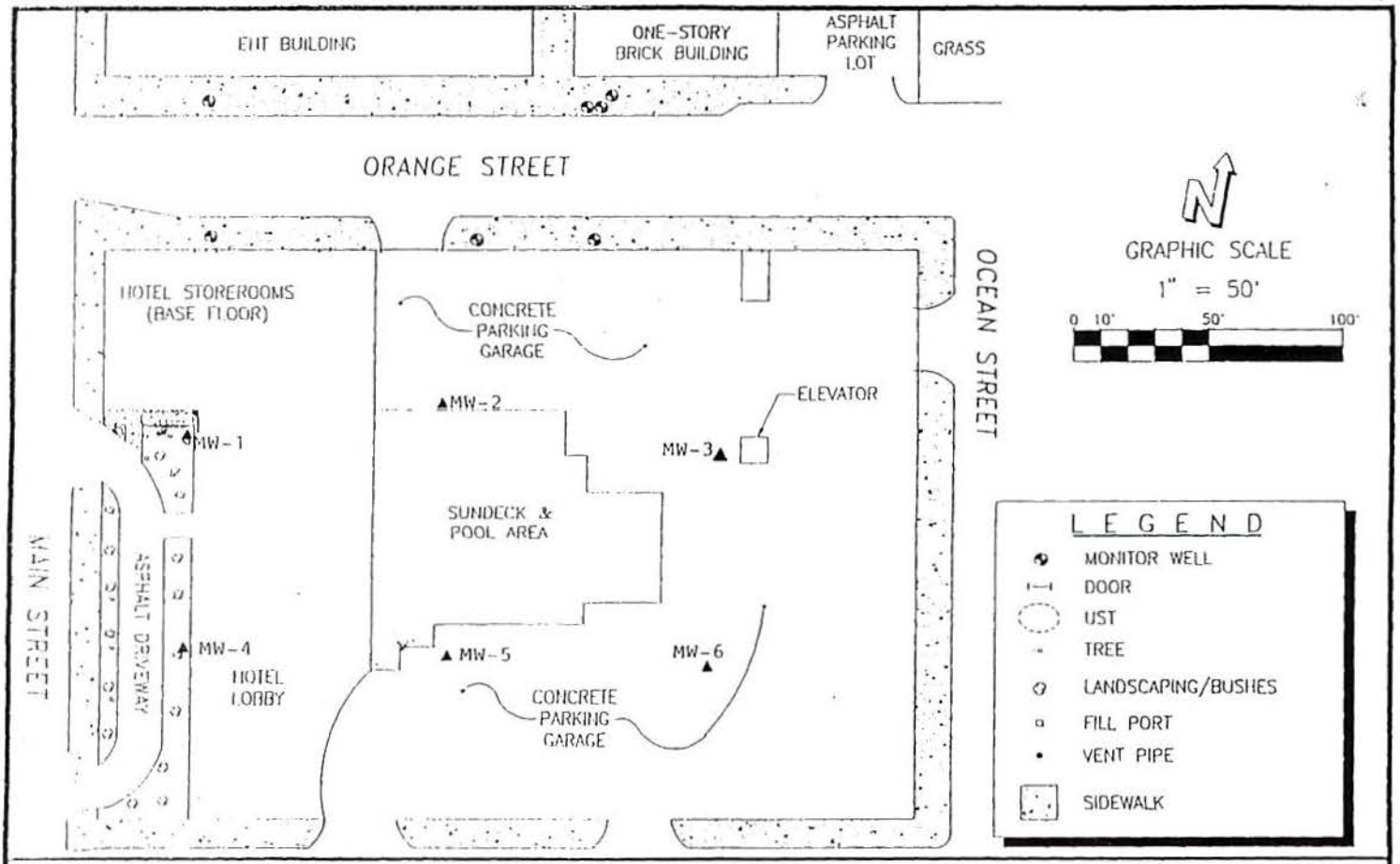


FIGURE 2. SITE PLAN

Aerostar

PARKVIEW INN
901 N. MAIN STREET
JACKSONVILLE, FLORIDA

DRAWN BY: KJS

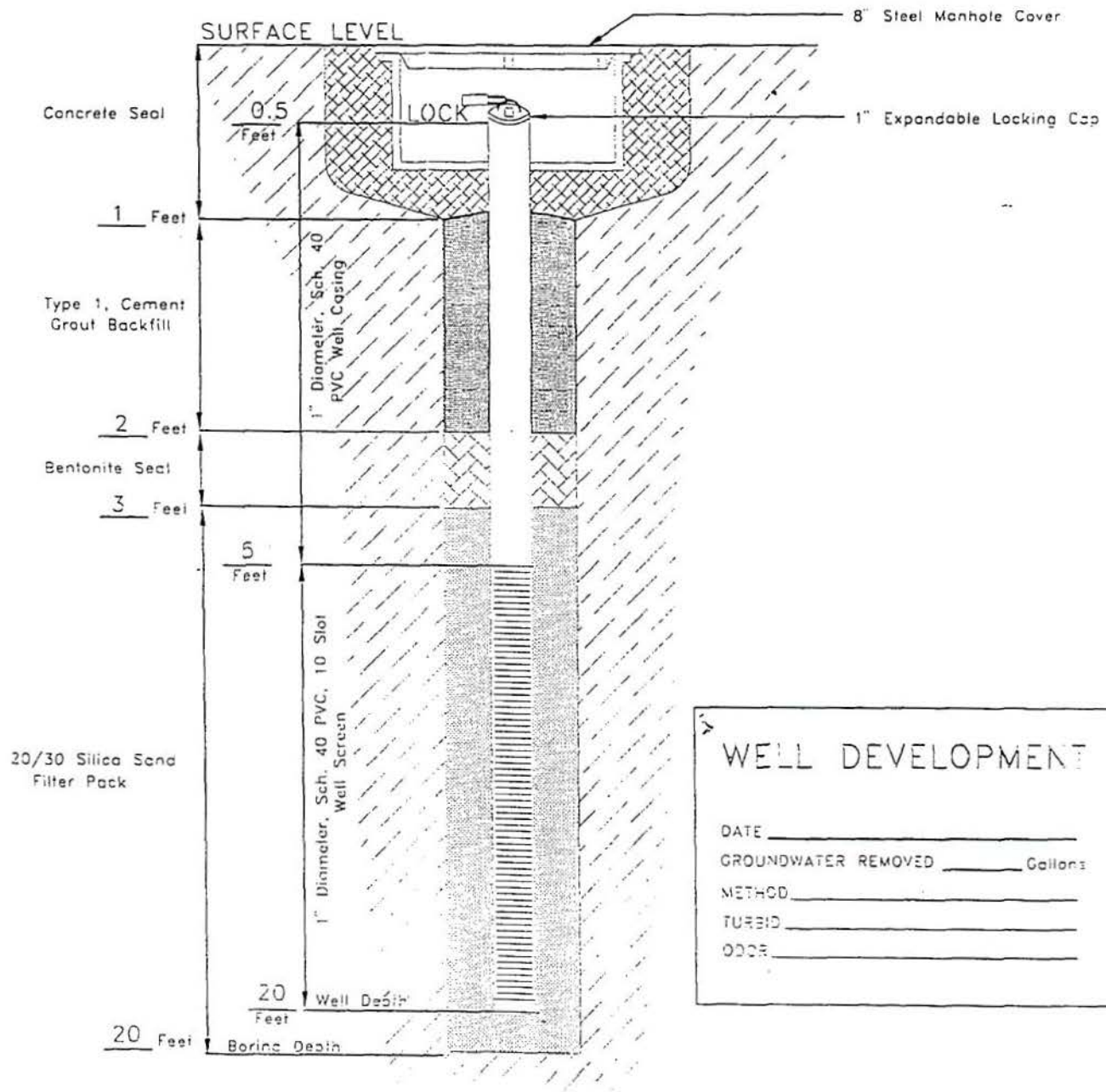
DATE: 12/16/98

Aerostar
Environmental Services, Inc.

Project No. _____
Project _____
Location _____
Date _____
Geologist _____
Drilling Method _____
Drilled By _____
TOC Elevation _____

Well No._____

PROPOSED MONITORING WELL CONSTRUCTION DIAGRAM



WELL DEVELOPMENT

DATE _____
GROUNDWATER REMOVED _____ Gallons
METHOD _____
TURBID _____
ODOR _____

EXCERPTS FROM DRAFT LETTER SUMMARY FOR REVISED WORK PLAN, PARK VIEW INN PROJECT NO. 31 BY RINANMAN ASSOCIATES DATED 21ST JUNE 1998

BACKGROUND

Park View acquired the site located at 901 N. Main Street, Jacksonville, Florida on December 1, 1995. The existing officers of Park View relied on parties that have since ended their relationship with Park View to administer technical details of the transaction. Apparently their is no evidence that a site investigation meeting the requirements of ASTM's *E 1527-94 Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process* was performed prior to the acquisition. This practice is intended to permit the user to satisfy one of the requirements to qualify for the *innocent landowners defense* to the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA, and others) liability: that is, the practices that constitute "all appropriate inquiry into the previous ownership and uses of the property consistent with good commercial or customary practice".

Environmental assessment and remediation activities of petroleum releases from underground storage tanks located at 937 North Main Street adjacent to the Park View Inn site in Jacksonville, Florida resulted in a Contamination Assessment Report (CAR) prepared for EHT Corporation (EHT) by PACO Consulting & Engineering, Inc.(PACO) dated July 1993. Based on hydrologic gradient studies, PACO concludes in this CAR that a plume of petroleum contamination is emanating from the hydrologically up-gradient Park View Inn site toward the down-gradient EHT site. Based on the findings contained in this CAR and knowledge that a coal gasification facility, a potential source of contamination, operated on the Park View Inn site from 1875 to approximately 1913, Niel Hornick, DEP, ordered Park View to initiate contamination assessment activities on their site in August 1997. Park View retained Mr. Nicholas V. Pulignano of the law firm Marks, Gray, Conroy and Gibbs to assist them in responding to this order. Mr. Pulignano retained Mr. Mark R. Rinaman, P.E., Rinaman Associates, in January 1998 on behalf of Park View to provide environmental engineering and service support in this matter.

Preliminary investigations indicated that several of the assumptions used by PACO in developing the findings in their CAR and subsequently relied upon by the DEP, did not incorporate the influence of many relevant historical land use and other site conditions on the EHT, Park View and surrounding sites.

MANUFACTURED GAS PLANT

Historically, coal tar was produced as a by-product of manufactured gas plants. Manufactured gas plants began producing illuminating or "Town Gas" for lighting and heating, and by-products for chemical production, in several eastern cities circa 1820. More than 900 gasification plants were operational by 1920. Coal tar has been used for various wood-preservation, road, roofing, waterproofing and fuel applications. Coal tar wastes typically are characterized as dense non-aqueous phase liquids (DNAPLs). The potential for long term contamination of groundwater at DNAPL sites is high due to their toxicity, limited solubility (but much higher than drinking water limits), and significant migration potential in soil

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gas, groundwater and/or as a separate phase. The by-product coal tar waste was often collected in open on-site pits if there was no market available such as a wood yard or power generating utility.

Apparently a coal gasifcation facility was operated on the Park View Inn site from approximately 1875 to about 1913. Copies of Sanborn maps in Attachment 3 indicate that the site had been cleared and converted to an automobile sales operation by 1913. The manufactured gas plant along with most other structures south of Hogans creek may have been shut down by the Jacksonville Fire of 1901. Figure 1 indicates the approximate layout of the facility over the period of its operation.

Phase Two – Determine the Vertical and Horizontal extent of Contaminants – Sampling & Analyses

A considerable number of soil borings have been made on and surrounding the Park View Inn site as indicated in Figure 1. A copy of the boring logs and a boring location map of Geotechnical borings made at seven locations on the Park View Inn site prior to construction of the existing hotel in 1964 are provided in attachment 4.

The groundwater levels indicated in the boring logs and their spatial distribution across the Park View Inn site corroborate the macro description of groundwater flow consistently described in the HANDEX reports for the up-gradient EXXON site and the HANDEX, PACO Consulting & Engineering, Inc.(PACO) and Integrated Environmental Solutions, Inc.(IES) reports for the down-gradient E.H.T. Corporation (EHT) site. The groundwater generally flows to the northeast from the Exxon site, through the Park View Inn site into the EHT site.

The geologic descriptions indicated in the boring logs and their spatial distribution across the Park View Inn site provide a north-south and east-west cross sectional description of the site geology. Area wide north-south and east-west cross sectional descriptions of the overall EXXON-Park View-EHT area geology are also possible by incorporating the geologic descriptions indicated in the boring logs provided in the HANDEX reports for the up-gradient EXXON site and the HANDEX, PACO, IES reports for the down-gradient EHT site. Possible cross sections A-A and B-B are depicted in Figure 1.

Review of the geotechnical boring logs indicates that there is apparently no gross contamination that might be associated with coal tar waste pits on the Park View Inn site. This is consistent with the land uses in the area indicated in the Sanborn maps such as on and off-site electric generating facilities and wood yard operations that would have provided a market for the waste coal tar by-product stream.

Coal tar (liquid phase) was generated during the gas cleaning process known as scrubbing and condensation. After manufacture via destructive distillation, newly refined gas (gaseous phase) passed through a mist of cold water. Particulates of tar stuck to the droplets and were collected into a tar separator. From there the water was decanted and reused or discharged into a sanitary sewer. The reformers, gas purifier and tar separation operations were apparently located within Area A and the new purified gas was piped to and stored in the large above ground tanks as depicted in Figure 1. Coal tar releases would have been most likely to occur in Area A since this is the area where coal tar was apparently produced and handled. Obviously, gas releases from the storage tanks would have dissipated into the atmosphere and would have little impact on the soils or groundwater.

Phase Three – Site Clean Up Activities

As it sinks through the vadose zone, a significant portion of DNAPL is trapped in the porous media at residual saturation due to interfacial tension effects. This entrapment depletes and, given a sufficiently small release or thick vadose zone, may exhaust the mobile DNAPL body above the water table.

Upon encountering the capillary fringe, DNAPL will tend to spread laterally and accumulate until the gravitational pressure developed at the base of the accrued DNAPL exceeds the threshold entry pressure of the underlying water saturated medium. A dissolved chemical plume will then form as equilibrium

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conditions develop with the DNAPL entering the saturated medium. A description of these processes is provided in attachment 5.

Although there is no evidence of coal tar release in the geotechnical boring logs there may have been minor releases around Area A associated with the reformers, gas purifier and tar separation operations. Figure 1 shows the subsurface footprint of the hotel structure in Area A. An estimated 8,850 cubic yards of material was apparently excavated and hauled from the Park View Inn site as a part of the hotel construction activities. In Area A alone excavation to about 9.5 ft below ground surface (approximately 3 ft below the water table) generated approximately 2,000 cubic yards of material which was apparently hauled off-site. If there has been a release in Area A then one of the most effective remediation methods - excavation and hauling off site - has already been applied to this site on a grand scale in the area most likely to have had a release. Supporting calculations are provided in attachment 6.

Excavation and construction below the water table would have required dewatering operations. An estimated 1,850,000 gallons of potentially contaminated water would have been pumped out of the excavation and disposed off-site. Supporting calculations are provided in attachment 6.

The absence of a record of gross contamination in the geotechnical boring logs; the tremendous amount of excavation that occurred on the Park View Inn site especially in Area A; the co-location of the most likely source of coal tar release within Area A; and the vast amount of groundwater that was pumped from the site during excavation and construction indicates that if there was a release of coal tar from this operation then it was probably already inadvertently remediated.

The constituents contaminating groundwater that have been identified in MW-9 in the EHT site investigations are found in automobile petroleum products and at service stations. These include: gasoline, leaded gasoline, waste oil, diesel and kerosene. Even if these constituents were released from the manufactured gas plant operation prior to its shutdown, the intervening ninety or so years of natural attenuation augmented by the large-scale excavation and groundwater removal at the Park View Inn site are strong indications that the apparent contamination is from the modern sources of these constituents.

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AUTOMOBILE AND PETROLEUM PRODUCTS

A review of the Sanborn maps in Attachment 3 indicates that as early as 1913 the EHT site was used as an automobile servicing and fueling facility and that the Park View Inn site was utilized for automobile sales and service. Review of historical aerial photographs indicates that the EXXON station began operating in the 1960s.

The EHT Site

HANDEX, PACO and IES reports indicate that they have collectively managed to find and remove three underground storage tanks and one above ground tank at the EHT site and have been attempting, unsuccessfully, to complete the process of determining the horizontal and vertical extent of contamination on this site over the last decade.

A Contamination Assessment Report (CAR) prepared for EHT Corporation (EHT) by PACO Consulting & Engineering, Inc.(PACO) dated July 1993, PACO concludes that a plume of petroleum contamination is emanating from the hydrologically up-gradient Park View Inn site toward the down-gradient EHT site, based on hydrologic gradient studies. The findings contained in this CAR and knowledge that a coal gasification facility, a potential source of contamination, operated on the Park View Inn site from 1875 to approximately 1913, prompted Niel Hornick, DEP, to order Park View to initiate contamination assessment activities on their site in August 1997.

Rinaman Associates' investigations of Sanborn maps in Attachment 3 have revealed that five additional USTs are apparently located on or attached to the EHT site that have not been accounted for in the HANDEX, PACO and IES reports. The locations of these tanks are shown in Figure 2.

The standard Darcian flow equation:

$$Vh = \frac{(Kh)\,(i)}{n_e}$$

Where: Vh = Average horizontal seepage velocity (ft/day)
Kh = Average horizontal hydraulic conductivity (ft/day)
i = Hydraulic Gradient (dimensionless)
n_e = Effective porosity (percentage)

is essentially a model of fluid flow through a packed bed requiring an assumption that the packed bed is to some degree homogeneous. The Park View geotechnical, EHT and EXXON soil boring logs support the use of this model in determining groundwater flow and plume migration patterns. However, when engineered systems are present from land surface down to below the water table this model will fail. For example if a 12 inch water line or a 21 inch sewer line have been installed, fill in the linear excavation such as pea gravel and the annular interfacial space on the outside piping can convey groundwater and contaminants through a plane much faster than the natural formation.

Extensive sewer and water piping essentially create a subsurface hydaulic connection between the EHT and Park View Inn sites. The extensive dewatering that occurred during construction of the Hotel would have made radical changes in the gradients driving groundwater flow in the local area. This relationship is depicted in Figure 3. This relatively temporary but drastic change in the hydraulic gradient could easily drag pollutants toward the Park View Inn site. Under post construction or normal hydrologic conditions an investigator might conclude using invalid assumptions that an isolated high concentration of pollutants indicates that the pollutants are emanating from the up gradient source. The engineered systems and dewatering events do not support the notion that the isolated high pollutant concentrations around MW-9 point to the Park View Inn site as the source. The same pollutants found in MW-9 were found in a nearby

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area containing nine pollutant storage tanks that were hydrologically "up-gradient" for a significant period of time with subsurface conduits linking them to the Park View Inn site.

The Park View Inn Site

Rinaman Associates' investigations of building drawings and Sanborn maps in Attachments 3 and 4 have revealed that there were three additional USTs that are apparently located on or attached to the Park View Inn site that have not been accounted for in the HANDEX, PACO and IES reports.

The location of these tanks is shown in Figure 2. The waste oil tank (circa 1884) was associated with the manufactured gas plant and was likely removed during the overall site excavation activities. The fact that this tank is clearly down-gradient of the MW-9 area, that there do not appear to be any subsurface conduits and no apparent contamination downgradient supports the notion that this tank no longer exists.

The 100 gallon automobile fuel tank was apparently located in the footprint of JEA transformer vaults A&B. Approximately 160 cubic yards of material were estimated to have been excavated to a depth of 12ft in construction of the vaults and approximately 50,000 gallons of groundwater were estimated to have been removed from the site. Supporting calculations are provided in Attachment 6. Aqueous phase residues from this tank may have migrated in a variety of directions including EHT's. However, this tank is relatively small and it is highly likely that local pollutant source materials and contaminated ground water associated with the tank were removed either by the hotel or JEA vault construction activities.

A 2,000 gallon No. 2 fuel oil UST was installed with the hotel to provide fuel to the hotel's boiler. In the 1980s a natural gas fired boiler was installed and the oil-fired boiler was shut down. The pollutants found in groundwater samples taken from the EHT site MW-9 indicate that a release from this tank may have occurred. However, it is possible that the tank and piping systems have maintained their integrity. The oil-fired boiler is highly corroded and may have acted as a sacrificial anode for the tank system via its electrolytic piping connection to the underground tank system.

Determining the integrity of the 2,000 gallon No. 2 fuel oil UST is extremely important since EHT's claim that Park View Inn has impacted the EHT site is much more substantial in the case that this tank system has had a release. Every effort using non-invasive investigation techniques followed by carefully planned and documented invasive characterization or remediation techniques should be made to determine the integrity of this tank.

THE EXXON SITE

HANDEX and GWL, Inc. reports indicate that they have collectively located and removed four tanks from the EXXON site and have been attempting, unsuccessfully, to complete the process of determining the horizontal and vertical extent of contamination on this site over the last decade.

In a letter from Allene G. McIntosh, Water Quality Division, to Matthew Fischer, HANDEX dated 23 December 1993, Ms. McIntosh responds negatively to a proposed initial remedial action because: *The soil plumes are six to twelve feet below the surface...*and *The plume in the Northeast corner of the site, extends offsite into the right-of-way...*

This letter is provided in attachment 7.

A HANDEX letter report for soil borings on the EXXON site dated 23 June 1997 is provided in Attachment 8. The report indicates that soil borings SB-1, SB-2 and SB-4 in the Northeast corner of the EXXON site diagonal and up gradient from the Park View Inn site indicate that this area is impacted by hydrocarbons.

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As mentioned in a previous section, the standard Darcian flow equation is essentially a model of fluid flow through a packed bed requiring an assumption that the packed bed is to some degree homogeneous. However, when engineered systems are present from land surface down to below the water table this model will fail. For example if a 12 inch water line or a 21 inch sewer line have been installed, fill in the linear excavation such as pea gravel and the annular interfacial space on the outside piping can convey groundwater and contaminants driven by a gradient through a plane much faster than the natural formation. Figure 4 shows the subsurface infrastructure that begins with the surface fittings such as the storm sewer, fire hydrant, water meter and water valve shown in Figure 5.

Apparently grease (vegetable /animal) from the Park View Inn Kitchens was fouling the JEA vaults and in 1984 a second vault was installed. An estimated 50,000 gallons of groundwater was removed during the construction of the vaults. The potential effect of this on the EXXON-Park View Inn-EHT hydraulic system is shown in Figure 4.

If the integrity of the 2,000 gallon No. 2 fuel oil tank system located on the Park View Inn site can be demonstrated to be intact then the contaminated ground water in the EHT sites' MW-9 was from one of two sources. Pollutants were either dragged back from the EHT site via subsurface infrastructure during dewatering operations or dragged down gradient from the EXXON site via subsurface infrastructure driven by the natural gradient or both. This relationship is show in Figure 4.

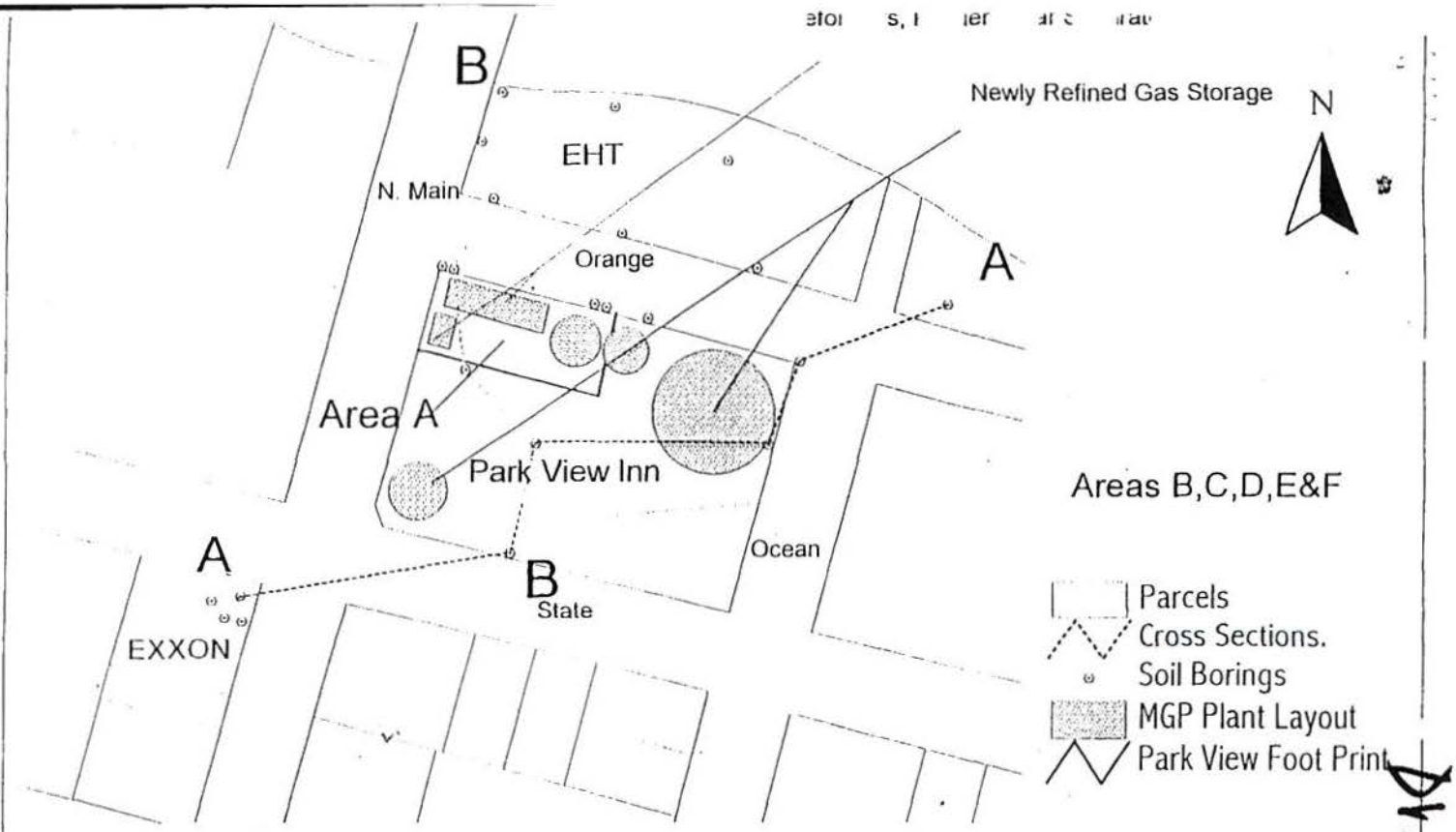

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Figure 1. Manufactured Gas Plant
Park View Inns, Inc. - Project No. 3.1
21 June 1998

RINAMAN ASSOCIATES

Engineering, Planning & Environmental Services

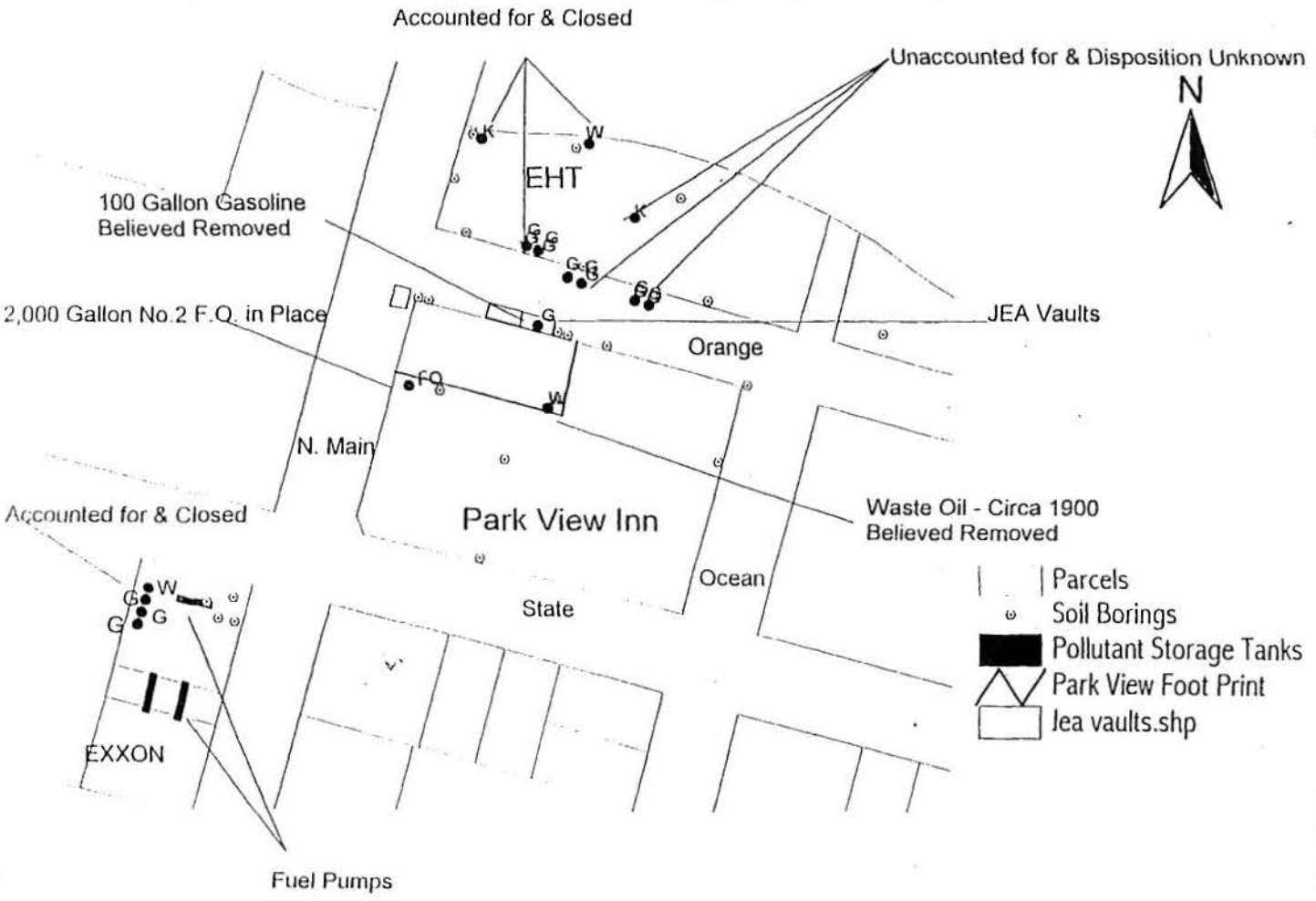

Figure 2. Pollutant Storage Tanks
Park View Inns, Inc. - Project No. 3.1
21 June 1998

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Engineering, Planning & Environmental Services

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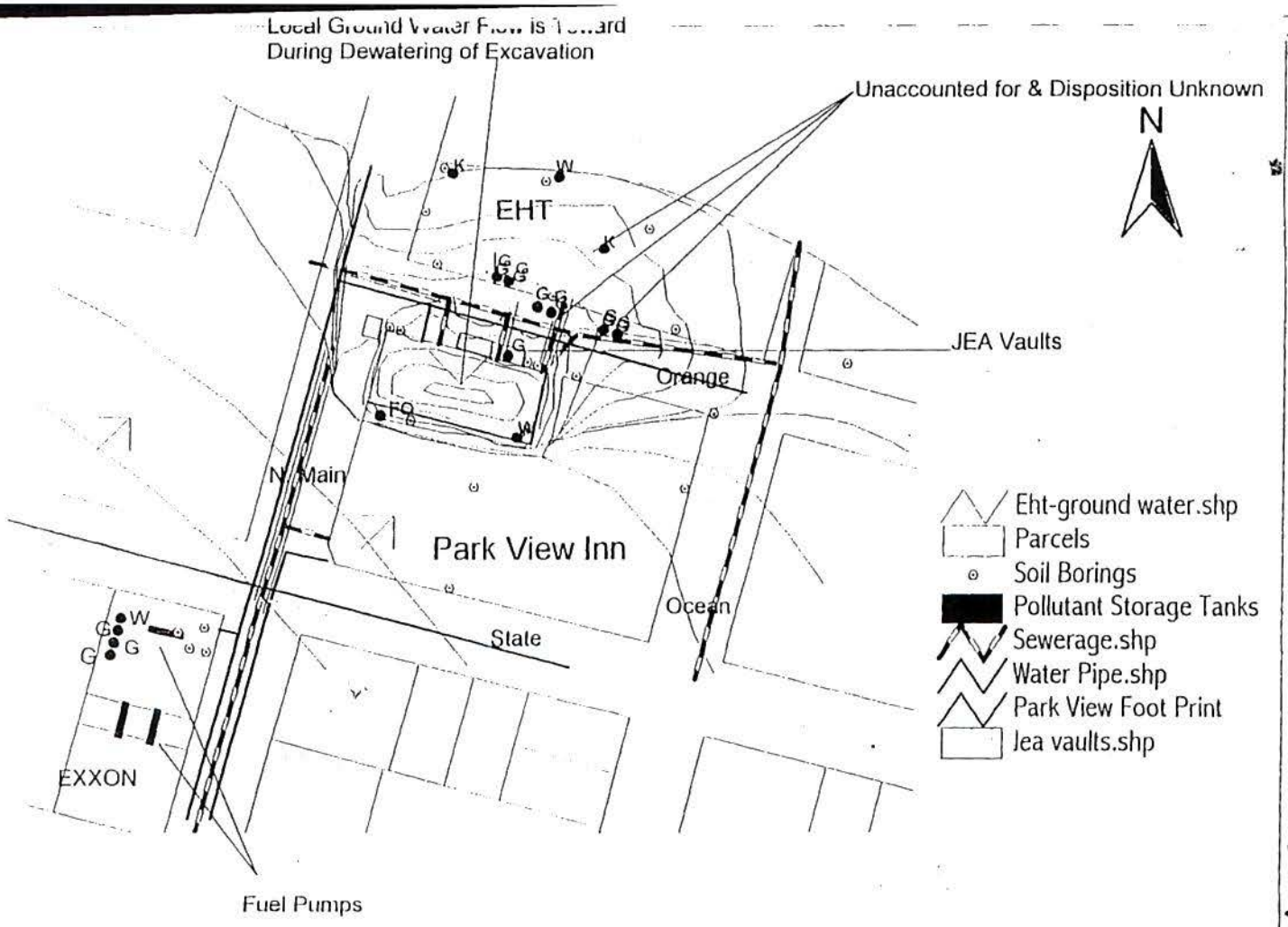

Figure 3. Dewatering Impacts on EHT Contaminant Migration
Park View Inns, Inc. - Project No. 3.1
21 June 1998

RINAMAN ASSOCIATES
Engineering, Planning & Environmental Services

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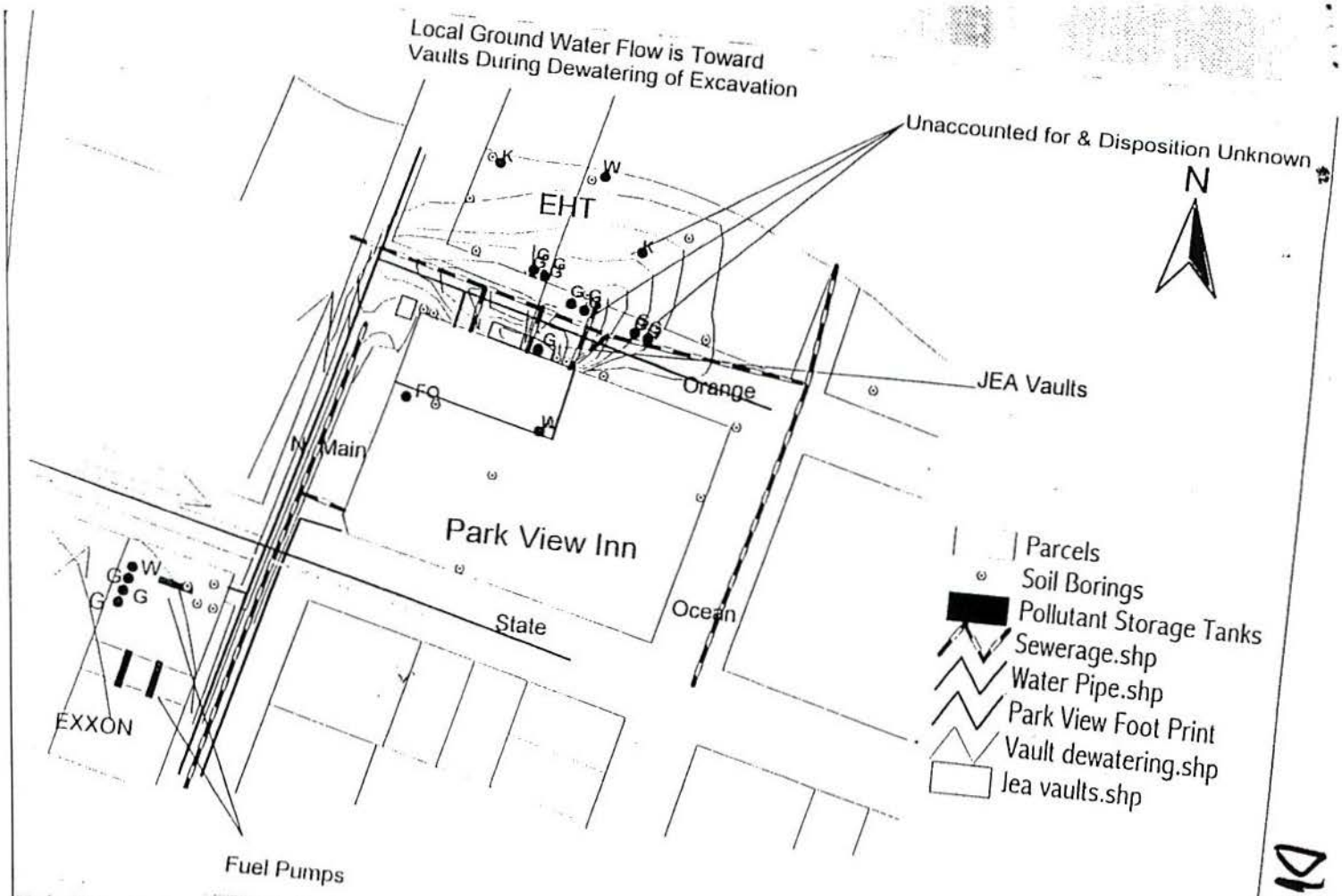

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re 4. Dewatering Impacts:EXXON Contaminant Migration
View Inns, Inc. - Project No. 3.1
ne 1998

RINAMAN ASSOCIATES
Engineering, Planning & Environmental Services

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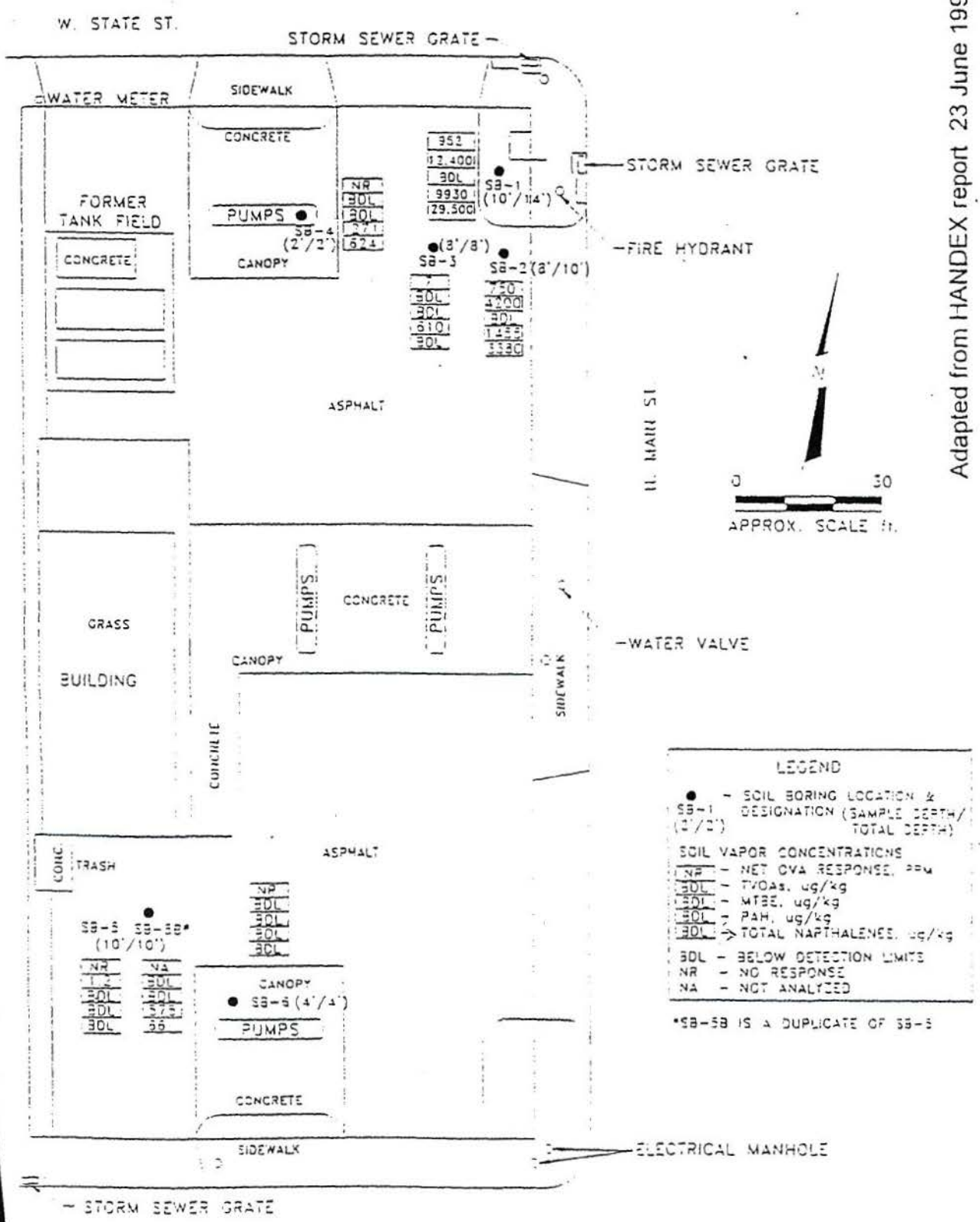

Adapted from HANDEX report 23 June 1997

RINAMAN ASSOCIATES
Engineering, Planning & Environmental Services

ure 5. EXXON Site
k View Inns, Inc. - Project No. 3.1
June 1998